# CHAPTER

3

#### **Chapter 3 Content**

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## Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

This chapter addresses the impacts of the alternatives described in Chapter 2. Each section of this chapter, as listed in the sidebar, describes relevant laws and regulations, existing conditions, the impacts of the No Build Alternative, the impacts of the build alternatives and JTA phase, and measures to avoid, minimize, and/or mitigate adverse impacts. The impacts of the build alternatives and JTA phase fall into three categories:

- **Direct Impacts.** As defined in 40 CFR 1508.8, direct impacts are impacts "caused by the action and occur at the same time and place." Examples of direct impacts are changes in travel time, the displacement of businesses, and increases in water pollution. Direct impacts can be permanent or temporary.
- Indirect Impacts. As defined in 40 CFR 1508.8, indirect impacts are defined as impacts "caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." Indirect impacts include induced growth and effects resulting from the induced growth, including changes in the pattern of land use, and "related impacts on air and water and other natural systems, including ecosystems."
- Construction Impacts. Construction impacts are the temporary impacts of construction activities.

Chapter 4 addresses a fourth category of impacts, cumulative impacts.

The design of the alternatives, as described in Section 2.1, incorporates measures to avoid or minimize adverse impacts. This chapter proposes additional potential measures to avoid, minimize, and/or mitigate adverse impacts. The FEIS will include commitments to specific mitigation measures.

When reading Chapter 3, please keep in mind the following.

- Where the chapter refers to the "bypass," it is referring specifically to only the four-lane access-controlled highway that would be built under either build alternative or the JTA phase.
- Where the chapter refers to "the project," it is referring to the OR 62: I-5
  to Dutton Road Project, regardless of alternative or phase. "The project"
  includes the "bypass" as well as all of the associated transportation system
  improvements.
- The JTA phase would be built first under either of the build alternatives, and in some cases there are additional impacts from building a first phase instead of building the entire build alternative. In these instances, where building the JTA phase results in additional impacts, the impact analysis for the build alternative assumes the higher impacts, instead of the impacts that would have occurred if the entire alternative were built at one time. An example is the crossing of Lone Pine Creek. If the SD Alternative were completely constructed at once, rather than being phased, the bypass would cross Lone Pine Creek. However, the JTA phase includes both the bypass crossing of Lone Pine Creek and a second crossing of Lone Pine Creek where existing OR 62 would be widened immediately north of bypass' southern terminus. Therefore, the analysis assumes the higher degree of impacts and reports the SD Alternative as crossing Lone Pine Creek at two locations.

The areas of potential impact (APIs) are specifically designed to appropriately consider potential impacts to each resource. Some types of impacts, such as historic sites and noise, affect only areas adjacent to the proposed project. Other types of impacts, such as air quality and land use, have a larger area of potential impact. The API for each resource is defined at the beginning of that section. For all resources, "project area" refers to the area shown on Figure 1-1 in Chapter 1.

#### TRANSPORTATION

3.1

#### **Section 3.1 Content**

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## 3.1 Transportation Facilities

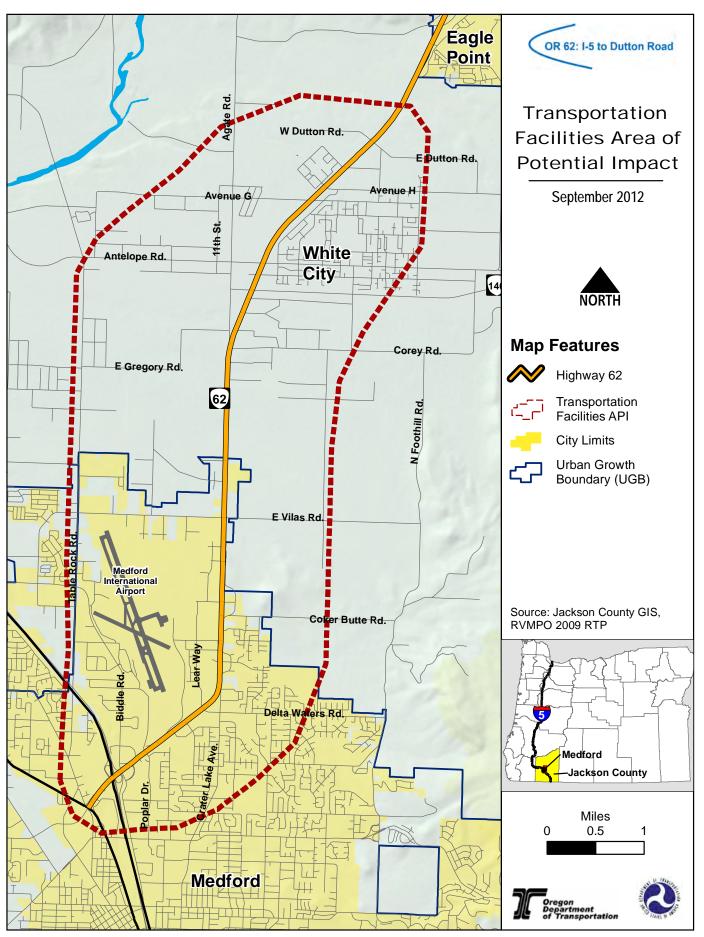
This section describes: 1) the existing transportation system, including the street and road system, pedestrian facilities, bicycle lanes and paths, and transit service; 2) operations, performance, and safety under the No Build Alternative; 3) the impacts of the build alternatives and JTA phase on the transportation system, operations, performance, and safety; 4) impacts during construction; and, 5) avoidance, minimization, and mitigation measures. Figure 3.1-1 shows the API for impacts on transportation facilities.

## 3.1.1 Regulatory Setting

The National Environmental Policy Act of 1969 as amended (NEPA) provides the overall regulatory setting for this section, which focuses on transportation-related conditions and impacts. Compliance with NEPA is required because the proposed project would be partially funded with funds from FHWA, a federal agency subject to NEPA. Other relevant legal and regulatory requirements are described below.

- A transportation facility should accommodate forecast traffic volumes 20 years from the expected date of completion of construction (Title 23, United States Code, Highways Section 109 Standards).
- FHWA regulations provide policies and procedures relating to the provision
  of pedestrian and bicycle accommodations, and federal participation in the
  cost of these accommodations. FHWA directs that full consideration should be
  given to the safe accommodation of pedestrians and bicyclists. FHWA further
  directs that the special needs of the elderly and disabled must be considered
  in all federal-aid projects that include pedestrian facilities. When current or
  anticipated pedestrian and/or bicycle traffic presents a potential conflict
  with motor vehicle traffic, every effort must be made to avoid, minimize, and
  mitigate the detrimental effects on all highway users who share the facility (23
  CFR 652).
- Oregon law (ORS 366.514) requires that footpaths and bicycle trails, including curb cuts or ramps, must be provided wherever a highway, road, or street is constructed, reconstructed, or relocated. The law applies to ODOT, cities, and counties. The same Oregon law also allows ODOT, cities, and counties to spend reasonable amounts of their share of the State Highway Fund on facilities for pedestrians and bicyclists.

**Figure 3.1-1** 



- Design, signing, and marking of pedestrian and bicycle facilities must comply with the Oregon Bicycle and Pedestrian Design Guide. Section 3.2.3.4 addresses compliance with the Oregon Bicycle and Pedestrian Plan.
- The Americans with Disabilities Act (ADA) provides civil rights protections to

For further information on impacts regarding traffic facilities, see the OR 62 Traffic Analysis Technical Report, OR 62 Corridor Solutions Project, August 23, 2011, and the Alternative Transportation Strategies Report, April 2011. These reports are available from the ODOT contact person identified on page i of this EIS.

individuals with disabilities. Federal-aid highway projects must comply with the ADA and do so by providing equal access for all persons. All projects must comply with ADA guidelines. The same degree of convenience, accessibility, and safety available to the general public must be provided to persons with disabilities (Title 42, United States Code, Chapter 126, Section 12101, et seq., and Title 47, United States Code, Chapter 5).

## 3.1.2 Affected Environment

## 3.1.2.1 Transportation System

## **Street and Road System**

Figure 3.1-2 shows the street and roadway system in the project area. Existing OR 62 within the project area extends 7.5 miles from I 5 in North Medford to Dutton Road, north of White City. North of Poplar Drive in Medford, the roadway is approximately 80 feet wide and consists of two 10-foot shoulders, four 12-foot travel lanes, and a 10-foot center lane that functions as a continuous two-way left-turn lane. Figure 2-2 in Chapter 2 shows a typical cross-section of the roadway. Businesses on OR 62 have direct driveway access to the highway, although some driveways are restricted to right in/right out movements. South of Poplar Drive to the North Medford Interchange (the interchange between I-5 and OR 62), OR 62 is wider and includes dedicated turn lanes. Figure 2-1 in Chapter 2 is a diagram of the North Medford Interchange.

The spacing between intersections along OR 62 violates OHP standards, which were established to achieve safe and efficient state highway operations. As Table 3.1 1 shows, of the 28 road intersections, only five meet the applicable spacing standard. If distances between driveways and other driveways; and, between driveways and intersections were accounted for, the number of spacing standard violations would be substantially higher.

In 2009, ODOT extended OR 140 west from OR 62 to I-5 at the Blackwell/Seven Oaks Interchange (Exit 35) by acquiring ownership of roadways from Jackson County. ODOT is preparing a corridor plan for OR 140 from its intersection with Brownsboro Road east of White City to the Blackwell/Seven Oaks Interchange. When completed in 2012, the plan will make recommendations for improving safety and operations on OR 140. The plan also is expected to call for re-routing OR 140 onto OR 62 north to Avenue G, then west on Avenue G.

The OR 140 Corridor Plan is now expected to be adopted in June 2013. As proposed for adoption, the plan:

- Shows OR 140 as routed along Agate Road between Leigh Way and Avenue G and along Leigh Way between OR 62 and Agate Road in White City
- States that the Preferred Alternative for the OR 62: I-5 to Dutton Road project would necessitate reassessment of the routing of OR 140 along Leigh Way and Avenue G and that "rerouting OR 140 along Crater Lake Highway [OR 62] and Avenue G is currently considered the preferred alternate route.
- Calls for widening Agate Road to provide a 3-lane urban section
- At the intersection of OR 140, OR 62, and Leigh Way, calls for adding a second westbound left-turn lane on OR 140 and an eastbound right-turn lane on Leigh Way

(ODOT 2012)

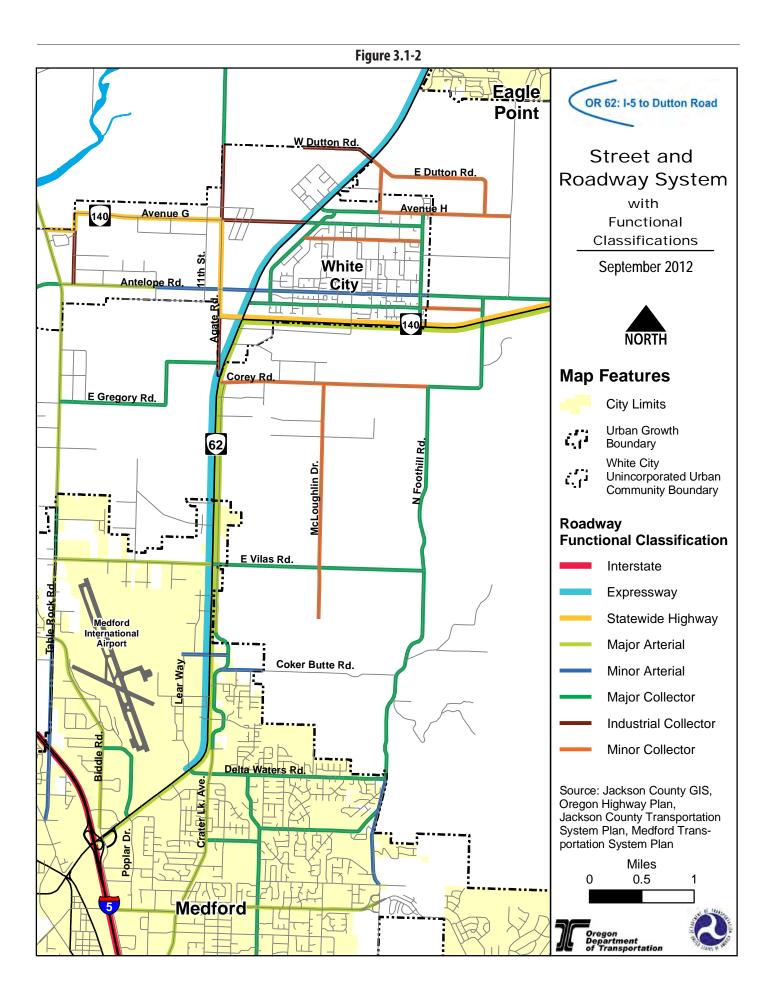


Table 3.1-1 Intersection Spacing (feet)

Intersection	Spacing Standard	Spacing
I-5 SB ramp — I-5 NB ramp	2,640	600
I-5 NB off-ramp — S. Jug handle	750	775
I-5 NB on-ramp — N. Jug handle	990	1,230
I-5 NB off- ramp - Poplar Drive	1,320	1,780
Poplar Drive - Sky Park Drive	2,640	1,880
Sky Park Drive - Whittle Road	2,640	850
Whittle Road — Delta Waters Road	2,640	1,170
Delta Waters Road — Webfoot Road	2,640	2,365
Webfoot Road — Cardinal Avenue	2,640	1,130
Cardinal Avenue — Commerce Drive	2,640	550
Commerce Drive — W. Coker Butte Road	2,640	2,065
W. Coker Butte Road — Burlcrest Drive	2,640	2,210
Burlcrest Drive — Kingsley Drive	2,640	760
Kingsley Drive — Vilas Road	2,640	1,580
Vilas Road — Justice Road	2,640	1,940
Justice Road — Dillon Way	2,640	1,140
Dillon Way — Corey Road	2,640	6,074
Corey Road — Agate Road	2,640	430
Corey Road — E. Gregory Road	2,640	1,000
E. Gregory Road — Gramercy Drive	2,640	1,045
Gramercy Drive — Merry Lane	2,640	865
Merry Lane – OR 140	2,640	480
OR 140 — Avenue A	2,640	880
Avenue A — Antelope Road	2,640	685
Antelope Road — Avenue G	2,640	4,290
Avenue G – Avenue H	2,640	1,080
Avenue H – Andries Way	2,640	1,410
Andries Way — Dutton Road	2,640	2,130

Note: Black-shaded cells mean that the interchange/ramp/street spacing is less than the corresponding standard. Sources: ODOT 1999, Table 13, p. 208; Traffic Analysis, August 2011.

#### **Pedestrian Facilities**

Figure 1-4 shows sidewalks in the project area. As Figure 1-4 shows, pedestrian facilities on OR 62 are limited. Only about one-fifth of OR 62 in the project area has sidewalks, with most located south of Delta Waters Road and in White City. Crossing OR 62 on foot is challenging because signalized intersections with crosswalks are spaced far apart. Nowhere on OR 62 in the project area are signalized intersections less than ¼-mile apart and there is no signalized intersection in the 2.3-mile stretch between Vilas Road and OR 140. The existing signalized intersections include pedestrian signals and crosswalks, but the highway's width (80 or more feet) and the volume of traffic turning onto and off of the highway put pedestrians at risk.

## **Bicycle Lanes**

Figure 1-5 shows bicycle facilities in the project area. On OR 62, there are shoulders with stripes and bicycle symbols painted on the pavement between I-5 and Dutton Road. Where parking lots are unpaved, the shoulders are often covered with gravel.

#### **Transit Service**

RVTD operates two bus routes on portions of OR 62: Route 1 (Airport/Biddle Road) and Route 60 (Medford/White City). Route 1 runs from downtown Medford to the Medford Airport via OR 62 between Poplar Drive and Biddle Road. Route 1 buses operate on weekdays between 6:30 AM and 6:30 PM, with one bus per hour.

Route 60 runs from Medford to White City using OR 62 between Coker Butte Road and the VA SORCC. Route 60 buses operate between 5:00 AM and 6:30 PM weekdays, with two buses per hour. There is no weekend service on either route.

The major bus stops along and near OR 62 are at the Rogue Valley Mall, Crater Lake Plaza, Cascade Shopping Center, and VA SORCC in White City. The stops at all three mall locations include pedestrian shelters. Along most of OR 62, bus stops are located approximately every ¾ mile. All stops on OR 62 between Coker Butte Road and White City are "flag stops," meaning the bus will stop by passenger request, but there are no designated bus stops or signs. Stops are discouraged on the shoulder of the highway because it is a dangerous environment for passengers, and buses have difficulty re-entering the highway because of heavy traffic. Therefore, Route 60 essentially operates as an express route between Medford and White City. There are park and ride lots at the VA SORCC and Cascade Shopping Center.

## 3.1.2.2 Traffic Operations and Performance

#### **Traffic Volumes**

In 2007, OR 62 at the North Medford Interchange had an ADT count of over 52,000 vehicles, with trucks accounting for 5 to 6 percent of the vehicle mix. This ADT was higher than the ADT on I-5 at the North Medford Interchange of approximately 44,000. This is even though I-5, as an Interstate, has a higher classification than OR 62, which is a Statewide Expressway. Counts farther north on OR 62 were approximately:

- 48,000 immediately south of Delta Waters Road
- 42,000 north of Delta Waters Road
- · 34,000 immediately south of OR 140
- 26,000 north of OR 140

## **Traffic Congestion**

Traffic congestion is a serious problem on OR 62. As shown in Table 3.1-2, traffic at four of the nine signalized intersections (intersections with traffic signals) on OR 62 fail to meet the applicable mobility performance target in the OHP. The target is stated as a peak-hour v/c ratio. If a v/c ratio is over 1.0, i.e., the traffic volume exceeds the highway's capacity and traffic queues form and lengthen. As a v/c ratio approaches 1.0, traffic flow becomes very unstable.

Table 3.1-2 also shows that traffic volumes at the Poplar Drive/OR 62 intersection exceed the City of Medford's mobility performance standard, as well as ODOT's, and that volumes at the intersection of Crater Lake Avenue and Delta Waters Road also violate the Medford standard. The City of Medford uses an LOS standard for congestion, instead of a v/c standard. The applicable Medford standard, an LOS of D or better, is described as "noticeable congestion with many vehicles stopping," and "individual cycle failures occur." (Medford 2003, p. 3-12) "Individual cycle failures occur" means that it takes more than one signal cycle for vehicles to get through an intersection. An LOS of E is described as "high delay . . . and frequent cycle failures." None of the signalized intersections in the project area violate Jackson County standards, which are v/c ratio of 0.95 and LOS of D.

Congestion on OR 62 begins during the morning commute period and gradually increases throughout the day, with little, if any, relief through the afternoon commute period, as the graphs in Figure 1-3 show. Spikes of traffic continue to occur throughout the day-long peak period, which never allow conditions to fully recover. This results in continual congestion throughout most of the day. As a result, it is estimated to take an average of 18 minutes to travel from I 5 to Dutton Road, with an average speed of 25 miles per hour (mph), and to take an average

A **v/c ratio** is the ratio of the volume of traffic on a street or road to its capacity to handle traffic.

Table 3.1-2 Existing Signalized Intersection Operations

		ce Target or dard	Measured Performance			
Intersection	V/C Ratio	LOS	V/C Ratio	LOS		
OR 62 Intersections						
I-5 Southbound Off-Ramp	0.85 <sup>1</sup>	$D^3$	0.73	В		
I-5 Northbound Off-Ramp	0.85 <sup>1</sup>	$D^3$	0.67	В		
Poplar Drive/OR 62	0.85 <sup>1</sup>	$D^3$	1.02	E		
Delta Waters Road/OR 62	0.85 <sup>1</sup>	$D^3$	0.86	D		
Vilas Road/OR 62	0.85 <sup>1</sup>	$D^3$	0.86	C		
OR 140/OR 62	0.85 <sup>1</sup>	$D^2$	0.86	C		
Antelope Road/OR 62	0.85 <sup>1</sup>	$D^2$	0.83	D		
Avenue G/OR 62	0.85 <sup>1</sup>	$D^2$	0.68	В		
Avenue H/OR 62	0.851	D <sup>2</sup>	0.69	В		
Other Intersections						
Crater Lake Ave/Delta Waters Rd	NA	$D^3$	NA	E		
Agate Road/Antelope Road	0.952	$D^2$	0.52	В		
Table Rock Road/Antelope Road	0.95 <sup>2</sup>	$D^2$	0.63	В		
Table Rock Road/Vilas Road	NA	$D^3$	0.81	C		
Table Rock Road/Biddle Road	NA	$D^3$	0.69	C		

Notes: The measured performance levels are based on 2007 traffic volumes. Black-shaded cells indicate that the v/c ratio or LOS exceeds the applicable performance standard.

Source: Traffic Analysis, August 2011, with edits to reflect December 21, 2011, amendments to the OHP.

of 16 minutes to travel from Dutton Road to I 5, with an average speed of 29 mph during the 4:15 - 5:15 PM peak.

## **Queuing and Blocking**

There are queuing and blocking problems at multiple locations along OR 62. Queuing is the lining up of vehicles at a traffic light or stop sign and can have a major effect on roadway operation and safety. Queues that exceed the length of a turn lane can block the adjacent through lanes creating both a reduction in roadway capacity and an unexpected obstruction in the travel lane that can result in a crash. Long queue lengths on through lanes can: block vehicles from turning onto the roadway from a driveway or intersecting local street; delay turns off of the roadway into driveways and local streets; and back up into intersections which are "upstream" in the traffic flow.

Long queue lengths can therefore spread and worsen congestion into intersections which are "upstream." As Table 3.1-3 shows, under existing conditions, there are gueuing blockages at 15 locations along OR 62.

As used in this EIS, **queuing blockages** are defined as locations where traffic queuing at an intersection either exceeds the storage capacity of a turn lane or backs up so far on a through lane that it blocks another intersection.

<sup>&</sup>lt;sup>1</sup>OHP target.

<sup>&</sup>lt;sup>2</sup> Jackson County standard.

<sup>&</sup>lt;sup>3</sup> City of Medford standard.

Table 3.1-3 Existing OR 62 Queuing Blockages PM Peak Hour (4:15 – 5:15 PM)

Intersection	Available Distance	Queue Length	Intersecting Roadway
Movement	(feet)	(feet)	or Exceeded Storage Lane
OR 62/I-5 Northbound Ramp			
Eastbound	525	650	I-5 SB ramps
OR 62/I-5 Southbound Ramp			
Westbound	525	700	I-5 NB ramps
Poplar Drive/OR 62			
Westbound	150	550	Hilton Road
Northbound	850	1,675	South Jug handle
Delta Waters Rd/OR 62			
Westbound	950	1,125	Crater Lake Avenue
Westbound Left	450	900	Left Turn Lane (Delta Waters)
Southbound Left	200	350	Left Turn Lane (OR 62)
E Coker Butte/OR 62			
Westbound	<100	150	Crater Lake Avenue
Vilas Road/OR 62			
Westbound	<100	150	Crater Lake Avenue
Southbound Right	150	300	Right Turn Lane (OR 62)
OR 140/OR 62			
Northbound Left	150	200	Merry Lane
Northbound Right	150	250	Right Turn Lane (OR 62)
Antelope Road/OR 62			
Eastbound Left	150	300	Left Turn Lane (OR 62)
Westbound Left	100	300	Division Road
Northbound Right	150	300	Right Turn Lane (OR 62)

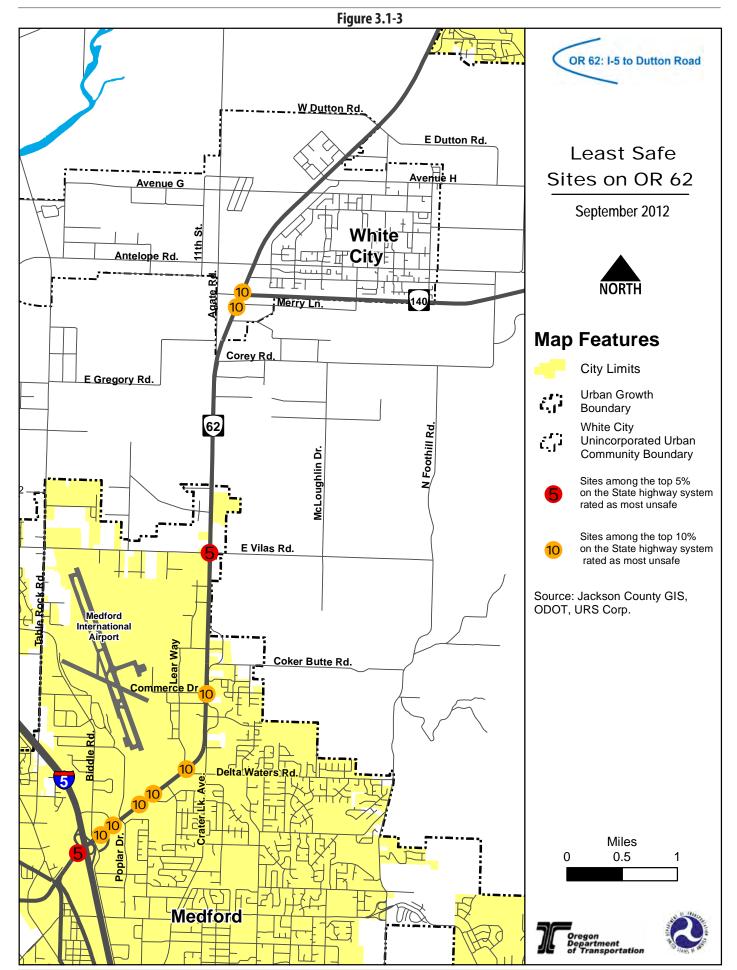
Notes: The results are based on 2007 traffic volumes. Listed queue lengths represent the length of 95 percent of all queues that exist for the particular traffic movement.

Source: Traffic Analysis, August 2011.

## 3.1.2.3 Traffic Safety

OR 62 in the project area has a long history of safety concerns. In 1990, ODOT designated OR 62 from I-5 to Eagle Point as Oregon's first safety corridor based on 13 traffic deaths over a 16-month period. Safety corridors are segments of state highway with an incidence of fatal and serious traffic crashes higher than the statewide average for a similar type of roadway. Safety concerns led to the initial OR 62 Corridor Solutions Project in 1998. More recently, in the five years from 2005 through 2009, there were 689 reported crashes on OR 62 between the North Medford Interchange and Dutton Road. Table 1-2 shows 2005-2009 crash rates for four segments of OR 62. Figure 1-2 shows the roads that define the segment boundaries. Crash rates exceeded the applicable statewide crash rate in segments 1, 2, and 4, when averaged over the five-year period. Segments 1 and 2 exceeded the statewide crash rate all five of the analysis years. Table 1-2 shows the breakdown of crashes by type in each segment. OR 62 in the project area has ten sites among the top 10 percent of sites on the state highway system rated as most unsafe, two of which are among the top 5 percent of sites rated as most unsafe. (ODOT 2010) The ratings are based on crash data for 2007 to 2009 and consider crash frequency, rate, and severity. The sites are referred to here as top 10 percent sites and top 5 percent sites. Figure 3.1-3 shows their locations.

**Safety Corridors** are stretches of state or local highway with an incidence of traffic crashes higher than expected for that type of roadway. Typical actions taken in these corridors to increase safety include more frequent enforcement, low cost engineering improvements and education efforts such as media events, brochures, and poster distribution. (ODOT 2002)



## 3.1.2.4 Freight

The OHP designates OR 62 and OR 140 as Statewide Freight Routes, making them part of the State Highway Freight System. The primary purpose of the State Highway Freight System is to "facilitate efficient and reliable interstate, intrastate, and regional truck movement through a designated freight system." (ODOT 1999, p. 65) OR 140 is heavily used by the trucking industry to transport goods, particularly hay, logs, and other forest products between Jackson County and Klamath and Lake Counties to the east.

## 3.1.2.5 Medford Airport

The Medford Airport, located just north and west of OR 62, covers approximately 989 acres. The Jackson County Aviation Authority owns and operates the airport. The airport serves Jackson County, the City of Medford, and seven other counties in southwest Oregon. The Medford Airport is used by general aviation, corporate aircraft, and commercial air carriers. Secondary public and private operations are located on the eastern edge of the airport property, including private air and delivery services, and a field office for the USCIS. Access to these facilities is via Commerce Drive.

The airport has two runways. The main north-south runway is approximately 8,800 feet in length and the cross runway (northwest-southeast) is approximately 3,100 feet in length. The 2011 Airport Master Plan Update calls for the cross runway to be replaced by a runway of equal length that is parallel to and just west of the main north-south runway, within the existing airport boundary.

Each runway has a designated runway protection zone (RPZ) that extends beyond the physical boundaries of the runway pavement, as shown in Figure 3.1-4. The purpose of the RPZ is to enhance the protection of people and property on the ground, as well as to provide adequate space for aircraft to safely maneuver for take offs and landings. This function is achieved through airport owner control over RPZs. Such control includes clearing RPZ areas of incompatible objects and activities and keeping them clear.

The Medford Airport has now abandoned the shorter 27 runway shown on Figure 3.1-4, so there is no longer an RPZ associated with it. Figure 3.1-4 FEIS shows the current RPZ.

## 3.1.3 Environmental Consequences

## 3.1.3.1 No Build Alternative

## **Transportation System**

## **Street and Road System**

Under the No Build Alternative, the OR 62 project would not construct improvements or modifications. Other projects in the area that are committed and funded in the RTP would be built. These projects are listed in Table 2-1 in Chapter

## **Pedestrian Facilities and Bicycle Lanes**

The RTP does not include any proposed pedestrian or bicycle improvements along OR 62. As Table 2.1 in Chapter 2 shows, many planned and funded projects in the area include sidewalks and bike lanes. None of the RTP projects would improve pedestrian facilities or bicycle lanes along OR 62.

#### **Transit Service**

For the period April 2012 through June 2015, RVTD has grant funding to extend its hours of service system-wide by 22 hours, to a total of 15 hours per day, and provide service on Saturdays from 7:00 AM to 8:00 PM, with 1-hour frequencies. RVTD hopes to obtain funding to continue this service expansion after June 2015.

## **Traffic Operations and Performance**

#### **Travel Time**

In 2035, it is forecast to take an average of 32 minutes during the peak hour to travel from I 5 to Dutton Road, with an average speed of 15 mph, and to take an average of 29 minutes to travel from Dutton Road to I 5, with an average speed of 17 mph.

#### **Traffic Volumes**

Table 3.1-4 contains existing and forecast ADT on representative segments of OR 62. ADT is forecast to grow by 7 percent by 2015 between I-5 and White City and by 13 to 14 percent in White City and north to Dutton Road. By 2035, ADT is forecast to grow by 21 percent south of Delta Waters Road, 29 percent between Delta Waters Road and Corey Road, 38 percent south of OR 140, and 54 percent north of OR 140 to Dutton Road.

Table 3.1-5 contains existing and forecast ADT on the southbound and northbound off-ramps from I-5 and local streets and roads in the project area. Substantial increases in volumes are forecast on the southbound off-ramp from I-5, Coker Butte Road, Vilas Road, and OR 140.

Table 3.1-4 Existing and Forecast Traffic Volumes, Future Bypass and OR 62, No Build and Build Alternatives (average daily traffic)

	Existing	No Build A	Iternative	SD Alte	ernative	DI Alte	ernative	
Segment	2007	2015	2035	2015	2035	2015	2035	
Future Bypasss								
South Terminus Interchange to Vilas Rd SPUI	NA	NA	NA	25,100	34,400	32,500	39,700	
Vilas SPUI to Agate Directional	NA	NA	NA	40,300	45,600	41,000	47,100	
Agate Directional to North Terminus Directional	NA	NA	NA	20,600	27,700	22,400	28,600	
OR 62								
Whittle Rd to Delta Waters Rd	47,700	51,200	57,800	37,600	43,350	31,000	35,800	
Delta Waters Rd to Corey Rd	42,000	44,800	54,300	16,500	20,100	13,700	17,000	
Gregory Rd to OR 140	34,400	39,000	47,400	36,100	41,600	35,400	42,400	
OR 140 to Dutton Rd	25,900	29,500	40,000	14,200	20,300	12,400	18,800	
		m Existing R 62	Change f		Alternative ( R 62	On Existing		
Whittle Road to Delta Waters Rd		+3,500	+10,100	-13,600	-14,450	-20,200	-22,000	
Delta Waters Rd to Corey Rd		+2,800	+12,300	-28,300	-34,200	-31,100	-37,300	
Gregory Rd to OR 140		+4,600	+13,000	-2,900	-5,800	-3,600	-5,000	
OR 140 to Dutton Rd		+3,600	+14,100	-15,300	-19,700	-17,100	-21,200	
			ange from ting	Percent	t Change fron	n No Build Al	ternative	
Whittle Road to Delta Waters Rd		7	21	- 27	-25	-39	-38	
Delta Waters Rd to Corey Rd		7	29	-63	-63	-69	-69	
Gregory Rd to OR 140		13	38	-8	-12	-9	-11	
OR 140 to Dutton Rd		14	54	-52	-49	-58	-53	

Note: Volumes are averages and are rounded to the nearest 100. Source: Southern Oregon Transportation Engineering, LLC.

Figure 3.1-4

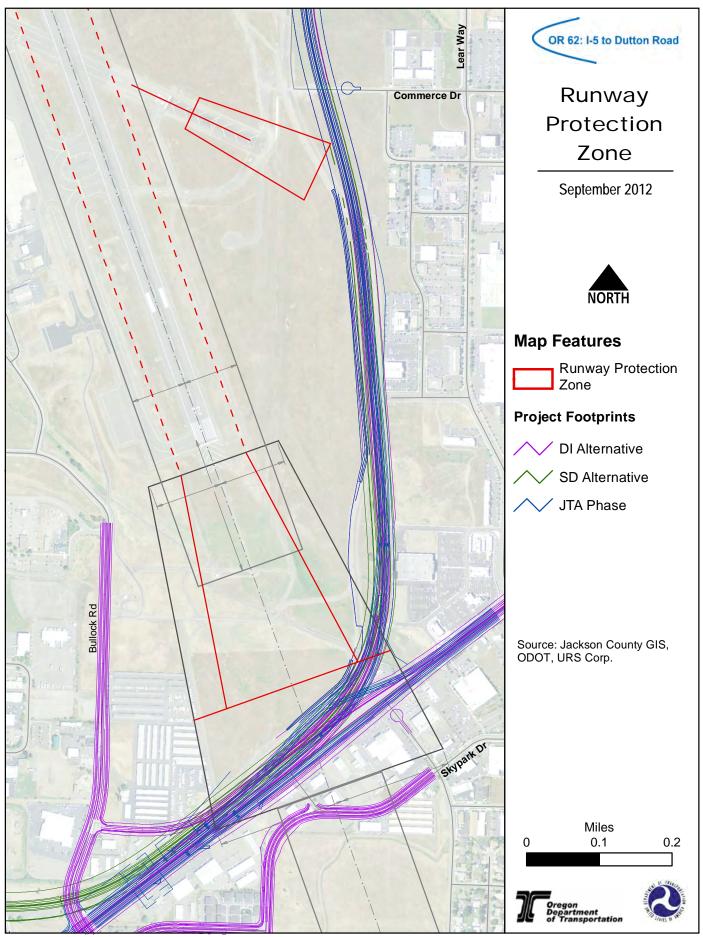


Figure 3.1-4 FEIS

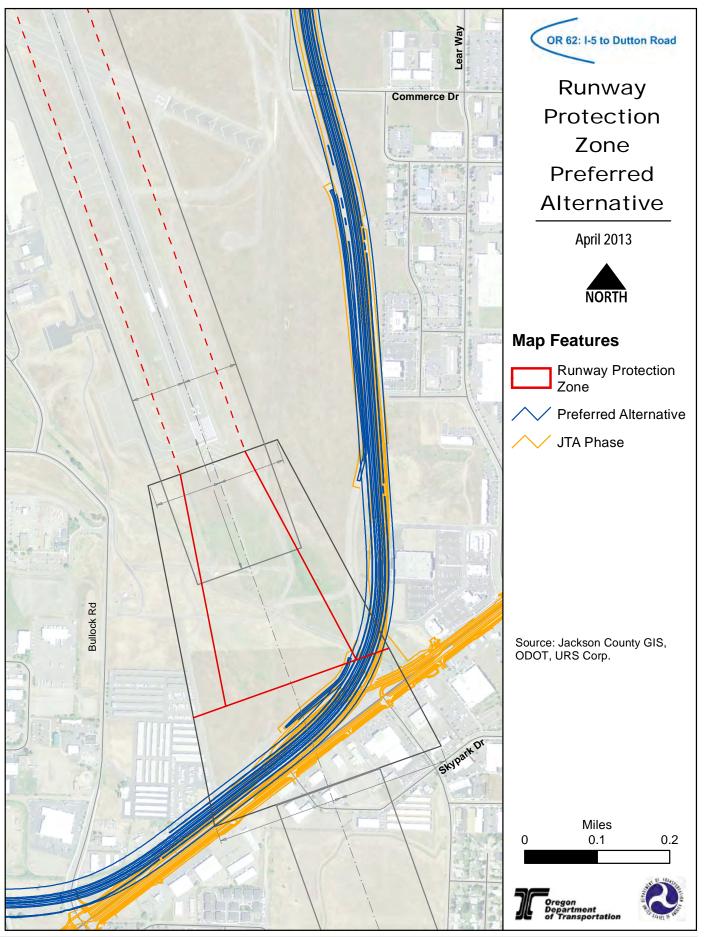


Table 3.1-5 Existing and Forecast Average Daily Traffic Volumes, I-5 Off-Ramps to OR 62 and Local Streets and Roads, No Build and Build Alternatives

	Existing	No Build A	Iternative	SD Alte	rnative	DI Alte	rnative	
Segment	2007	2015	2035	2015	2035	2015	2035	
I-5 Southbound Off-Ramp	7,500	8,400	11,700	15,300	16,200	8,900	11,900	
I-5 Northbound Off-Ramp	14,700	15,300	16,300	17,300	19,300	15,000	16,000	
Poplar Drive	18,300	18,800	19,000	18,100	19,600	8,500	11,100	
Delta Waters Road	16,200	15,200	17,000	16,900	17,400	16,800	18,900	
Coker Butte Road	4,200	6,400	8,600	7,700	9,300	7,700	9,500	
Vilas Road	15,100	19,800	26,000	10,200	13,000	11,500	13,900	
OR 140	9,600	11,000	14,900	12,700	16,200	12,100	15,700	
		Change fro	m Existing	Cha	nge from No	Build Altern	ative	
I-5 Southbound Off-Ramp		+900	+4200	+6,900	+4,500	+500	+200	
I-5 Northbound Off-Ramp		+600	+1,600	+2,000	+3,000	-300	-300	
Poplar Drive		+500	+700	-700	+600	-10,300	-7,900	
Delta Waters Road		-1,000	+800	+1,700	+400	+1,600	+1,900	
Coker Butte Road		+2,200	+4,400	+1,300	+700	+1,300	+900	
Vilas Road		+4,700	+10,900	-9,600	-13,000	-8,300	-12,100	
OR 140		+1,400	+5,300	+1,700	+1,300	+1,100	+800	
			Percent Change from Existing Percent Change			ge from No Build Alternative		
I-5 Southbound Off-Ramp		+12	+56	+82	+38	+6	+2	
I-5 Northbound Off-Ramp		+4	+11	+13	+18	-2	-2	
Poplar Drive		+3	+4	-4	+3	-55	-42	
Delta Waters Road		-6	+5	+11	+2	+11	+11	
Coker Butte Road		+52	+105	+20	+8	+20	+10	
Vilas Road		+31	+72	-48	-50	-42	-47	
OR 140		+15	+55	+15	+9	+10	+5	

Note: Note: Volumes are at locations near OR 62 and are rounded. Source: Southern Oregon Transportation Engineering, LLC.

## **Traffic Congestion**

Traffic congestion on OR 62 would worsen only slightly by 2015 under the No Build Alternative, but would increase substantially by 2035. Table 3.1-6 shows forecast performance at signalized intersections in both 2015 and 2035 under the No Build Alternative. Volume-to-capacity ratios are forecast to be only slightly higher by 2015 and the same intersections that fail under existing conditions are forecast to fail to meet the applicable performance targets and standards. By 2035, all but one of the signalized intersections on OR 62 are forecast to fail to meet the applicable ODOT target. Six of the 11 signalized intersections would also violate the applicable City of Medford or Jackson County standard. In 2035, all but one unsignalized OR 62 intersection are forecast to fail to meet the applicable performance target. These forecast 2035 failing OR 62 intersections include: Sky Park Drive, Whittle Road, Corey Road, Agate Road, Gregory Road, and Dutton Road. Only the Commerce Drive intersection with OR 62 is forecast to meet applicable standards in 2035.

A traffic signal change and a planned project have altered the v/c ratios in Table 3.1 6. The 2015 v/c ratio at the intersection of OR 62 and Vilas Road is now forecast to be 0.75, instead of 0.99, because ODOT has added "protective-permissive phasing" to the traffic signal at the intersection for eastbound and westbound left-turn movements on Vilas Road. In the modeling completed for the DEIS, these left-turn movements could occur only during gaps in oncoming traffic. By 2035, higher traffic volumes are forecast to have reduced the added advantage of the left-turn phases. The

project to add left-turn lanes from OR 140 westbound to OR 62 southbound referenced in Section 2.1.1 is responsible for the small improvement in the forecast performance of the intersection of OR 62 and OR 140 (from a v/c ratio 1.00 to a v/c ratio of 0.95 in 2015 and from a v/c ratio of 1.54 to a v/c ratio of 1.48 in 2035).

As with OR 62 signalized intersections, the performance of other intersections in the area in 2015 is forecast to be similar to existing conditions, but to substantially deteriorate by 2035. This includes intersections that are under City of Medford and Jackson County jurisdiction. Such intersections that would exceed the applicable standards in 2035 are the signalized intersections of Crater Lake Avenue with Delta Waters Road and Table Rock Road with Vilas Road, and the unsignalized intersections of:

- Crater Lake Avenue with: Owens Drive, Coker Butte Road, Vilas Road and Corey Road
- · Vilas Road with: Lear Way and Peace Lane
- Gregory Road with: Table Rock Road and Agate Road
- · Agate Road with: Leigh Way and Avenue G
- 11th Street with: Antelope Road and Avenue G

The forecast 2035 v/c ratios at most of these intersections are well over 1.0. The v/c ratio at the intersection of Crater Lake Avenue with Owens Drive is over 2.0.

Table 3.1-6 Forecast 2015 and 2035 Signalized Intersection Operations, No Build Alternative

		formance Target/ Standard Forecast Pe			erformance	erformance			
			20	15	20	35			
Intersection	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS			
OR 62 Intersections									
I-5 Southbound Off-Ramp	0.85 <sup>1</sup>	$D^3$	0.75	В	0.87	C			
I-5 Northbound Off-Ramp	0.85 <sup>1</sup>	$D^3$	0.69	В	0.75	В			
Poplar Drive	0.85 <sup>1</sup>	$D^3$	1.04	E	1.05	F			
Delta Waters Road	0.85 <sup>1</sup>	$D^3$	0.88	D	1.00	Е			
Owens Drive/OR 62	0.85 <sup>1</sup>	$D^3$	0.70	D	0.92	Е			
Coker Butte Road/OR 62	0.85 <sup>1</sup>	$D^3$	0.75	В	0.88	C			
Vilas Road	0.85 <sup>1</sup>	$D^3$	0.99	D	1.38	F			
			0.75		1.36				
OR 140	0.85 <sup>1</sup>	$D^2$	1.00	D	1.54	F			
			0.95	E	1.48				
Antelope Road	0.85 <sup>1</sup>	D <sup>2</sup>	0.84	D	1.04	F			
Avenue G	0.85 <sup>1</sup>	$D^2$	0.69	В	0.89	C			
Avenue H	0.85 <sup>1</sup>	$D^2$	0.72	В	0.88	C			
Other Intersections									
Crater Lake Ave/Delta Waters Rd	NA <sup>4</sup>	$D^3$	NA	D	NA	F			
Agate Road/Antelope Road	0.95 <sup>2</sup>	$D^2$	0.52	В	0.65	В			
Table Rock Road/Antelope Road	0.95 <sup>2</sup>	$D^2$	0.63	В	0.76	С			
Table Rock Road/Vilas Road	0.95 <sup>2</sup>	$D^3$	0.94	D	1.31	F			
Table Rock Road/Biddle Road	0.95 <sup>2</sup>	$D^3$	0.72	С	1.01	D			

Note: Black-shaded cells indicate that the v/c ratio or LOS exceeds the applicable performance target or standard.

<sup>&</sup>lt;sup>1</sup>OHP target.

<sup>&</sup>lt;sup>2</sup> Jackson County standard.

<sup>&</sup>lt;sup>3</sup>City of Medford standard.

<sup>&</sup>lt;sup>4</sup>The City of Medford standard is a LOS, not a v/c ratio, so there is no applicable v/c standard. Jackson County has both v/c and LOS standards. Source: Traffic Analysis, August 2011.

#### **Queuing and Blocking**

By 2015, queuing and blocking problems along OR 62 are forecast to worsen, compared to existing conditions. Queues would lengthen, which would more than double, from 15 to 37, the number of queuing blockages, as defined in Section 3.1.2.2. Queuing blockages on area roadways other than OR 62 also would increase substantially. For a list of all locations where queuing blockages would occur, see Table 3-5 of the Traffic Analysis Report.

The addition of protective-permissive phasing for eastbound and westbound left-turn movements on Vilas Road and the project to add left-turn lanes from OR 140 westbound to OR 62 southbound have changed forecast gueue lengths and blockages in 2015. Some previously forecast blockages are now not forecast to occur, but blockages at other locations are now forecast. The net effect is to reduce the number of forecast blockages in 2015 under the No Build Alternative from 37 to 36.

By 2035, gueues would lengthen further and the number of gueuing blockages along OR 62 would increase to 47, over triple the number of queuing blockages under existing conditions, as shown in Table 3.1-7. Figure 3.1-5 shows the longest queue in each direction from the intersections in Table 3.1-7. Queuing blockages on area roadways other than OR 62 also would increase substantially. For a list of all locations where queuing blockages would occur, see Table 3-6 of the Traffic Analysis Report.

The addition of protective-permissive phasing for eastbound and westbound left-turn movements on Vilas Road and the project to add left-turn lanes from OR 140 westbound to OR 62 southbound have changed forecast queue lengths and blockages in 2035. Some previously forecast blockages are now not forecast to occur, but blockages at other locations are now forecast. The net effect is to increase the number of forecast blockages in 2035 under the No Build Alternative from 43 to 45.

Figure 3.1-5, which is as contained in the DEIS, shows the queues that were shown in Table 3.1 7 of the DEIS as causing blockages. Figure 3.1-5 FEIS reflects the revisions to gueue lengths shown in Table 3.1-7 of this FEIS.

#### **Traffic Safety**

Under the No Build Alternative, the high crash rates described in Section 3.1.2.3 would continue. Because of the forecast increase in traffic volumes, congestion, gueue lengths, and blocking described above, crashes on OR 62 would increase. As shown in Table 3.1-4, by 2035, traffic volumes on OR 62 are forecast to increase by 21 to 54 percent, depending on location. OR 62 as a whole would experience increased congestion as volumes from turn lanes block adjacent through lanes and signalized intersections operate above capacity. Mainline queue lengths would block adjacent local streets, which would cause local street queue lengths to lengthen and system-wide congestion to occur. Under these conditions, safety statistics and trends indicate that existing locations in the corridor that have crash frequencies, crash rates, or crash severities that place them in the lists of the top 5 to 10 percent of crash sites statewide would become worse, and additional sites could be added to lists.

## **Medford Airport**

Under the No Build Alternative, there would be no impacts on Airport property, operations, or access.

Table 3.1-7 Forecast 2035 No Build Alternative Queuing Blockages on OR 62

Table 3.1-7 Forecast 2035 No	Available	Queue	
Intersection Movement	Distance (fact)	Length	Intersecting Roadway Or Exceeded
	(feet)	(feet)	Storage Lane
I-5 Northbound Off-Ramp	500	025	L C Courth and January
Eastbound Through	500	925	I-5 Southbound ramps
Westbound Right	300	400	Right Turn Bay (OR 62)
I-5 Southbound Off-Ramp			
Southbound Left	200	350	Left Turn Bay (I-5 off-ramp)
Southbound Right	220	350	Right Turn Bay (I-5 off-ramp)
Westbound Through	500	850	I-5 Northbound ramps
Eastbound Through	1,995	2,250	OR 99
Poplar Drive			
Westbound Left	140	3,625	Hilton Road
Westbound Through	140	3,625	Hilton Road
Northbound Through	850	2,175	South Jug handle
Northbound Left	450	500	Left Turn Bay (OR 62)
Delta Waters Road			
Westbound Left	460	925	Left Turn Bay (Delta Waters)
Westbound Through	940	1,250	Crater Lake Avenue
Southbound Left	200	375	Left Turn Bay (OR 62)
Northbound Left	400	425	Left Turn Bay (OR 62)
Northbound Right	225	450	Right Turn Bay (OR 62)
E Coker Butte			
Eastbound Left	200	275	Left Turn Bay (Coker Butte)
Northbound Right	200	225	Right Turn Bay (OR 62)
Vilas Road			
Eastbound Left	250	350 400	Left Turn Bay (Vilas Rd)
Eastbound Through	1,865	4,725	Lear Way
Eastbound Right	200	425	Right Turn Bay (Vilas)
Westbound Left	<100	125 150	Crater Lake Ave
Westbound Through/Right	<100	150	Crater Lake Ave
Southbound Left	200	250 350	Left Turn Bay (OR 62)
Southbound Through	1,900 1,900; 3,375	4,125 3,225	Justice Road Justice Road, Dillon Way
Southbound Right	150	350 325	Right Turn Bay (OR 62)
Northbound Left	225	425 375	Left Turn Bay (OR 62)
Northbound Through	1,525	5,600 6,325	Kingsley Road

Table 3.1-7 Forecast 2035 No Build Alternative Queuing Blockages on OR 62 Ctd.

Intersection Movement	Available Distance (feet)	Queue Length (feet)	Intersecting Roadway Or Exceeded Storage Lane
OR 140			
Southbound Left	200	400	Left Turn Bay (OR 62)
Southbound Through	830; 1,490 <sup>1</sup> 830	1,850 1,025	Avenue A, Antelope Road Avenue A
Eastbound Left	200	350	Left Turn Bay (Leigh)
Eastbound Right To be removed	125 NA	400 NA	Right Turn Bay (Leigh) N/A
Northbound Left	150	350	Left Turn Bay (OR 62)
Northbound Through	425; 1,250;	3,400	Merry, Gramercy, Gregory
	2,300 <sup>1</sup> 425	800	Merry
Northbound Right	150	225	Right Turn Bay (OR 62)
Westbound Left/Through To be removed	525 NA	3580 NA	Dollar Tree Access N/A
Westbound Left	525	850	Dollar Tree Access
Westbound Through	525	575	Dollar Tree Access
Antelope Road			
Eastbound Left	150	325 350	Left Turn Bay (Antelope)
Eastbound Through	350	1,550 1,200	Shopping Center
Eastbound Right	100	225 200	Right Turn Bay (Antelope)
Westbound Left	200	525 500	Left Turn Bay (Antelope)
Westbound Through/Right	760	3,050 3,100	Division Road
Northbound Left	200	250	Left Turn Bay (OR 62)
Northbound Right	150	300	Right Turn Bay (Antelope)
Southbound Left	200	375 250	Left Turn Bay (OR 62)
Southbound Right	150	350	Right Turn Bay (OR 62)

Note: The listed queue lengths represent the length of 95 percent of all queues that exist for the particular traffic movement.

Source: Traffic Analysis, August 2011.

## 3.1.3.2 Build Alternatives

This section describes the impacts of the two build alternatives on the transportation system and traffic operations, performance, and safety. The design options between Vilas Road and Agate Road are not addressed separately because their impacts would be identical.

## **Transportation System**

Section 2.1.2 describes the changes to the transportation system under the build alternatives, including the interchange, roadway, pedestrian facility, and bicycle lane improvements that would occur. The impacts on traffic operations, performance, and safety are described below. Bicyclists and pedestrians would be able to use the bypass, entering and leaving at the interchanges. The reduced

<sup>&</sup>lt;sup>1</sup>The lengths are to the intersecting roads in the fourth column.

volumes on existing OR 62 described below would improve conditions for bicyclists.

The addition of sidewalks and bicycle lanes on Vilas Road would improve conditions for pedestrians and bicyclists. Transit service would be the same as under the No Build Alternative. However, transit users would benefit from the reduced congestion on existing OR 62 through reduced transit travel times and improved schedule reliability.

Because, as described in section 2.1.2.3, the build alternatives would displace Agate Road from its intersection with OR 62 to its intersection with Avenue G, the build alternatives would require the re-routing of OR 140 west of OR 62. However, as stated in section 2.1.2.3, the OR 140 Corridor Plan currently under development is expected to call for re-routing OR 140 onto OR 62 to Avenue G, then west on Avenue G. (ODOT 2011, p. 5). This re-routing would allow OR 140 to pass under the bypass on Avenue G.

## **Traffic Operations and Performance**

The impacts on traffic operations and performance described below would result from two major effects the build alternatives would have on how traffic would use the roadway system in the project area. The first is that the build alternatives would divert traffic from existing OR 62 onto the bypass. The second is that the build alternatives would attract latent demand traffic onto the bypass and existing OR 62. Latent demand traffic is traffic that would use other routes, such as Table Rock Road and Foothill Road, to avoid the congestion on OR 62. Both the diversion effect and the latent demand effect would occur mainly south of the directional interchange at Agate Road. The DI Alternative would divert more traffic from existing OR 62 because its southern terminus interchange provides connections between the bypass and both I-5 and existing OR 62. The SD Alternative would attract more latent demand because its southern terminus interchange with I-5 would enhance traffic flow, attracting more trips to the bypass.

#### **Traffic Volumes**

SD Alternative

As Table 3.1-4 shows, the SD Alternative is forecast to reduce ADT on existing OR 62 by about one-quarter south of Delta Waters Road compared to the No Build Alternative in both 2015 and 2035. North of Delta Waters Road to Corey Road, the SD Alternative would reduce ADT by nearly two-thirds. Between Gregory Road and OR 140, i.e., immediately north of the directional interchange at Agate Road, the SD Alternative would reduce ADT on existing OR 62 much less, only 8 percent in 2015 and 12 percent in 2035. This would be because OR 62 would carry traffic between the bypass and OR 140 east. North of OR 140, ADT would be about one-half the ADT under the No Build Alternative.

Table 3.1-5 lists existing and forecast ADT on the southbound and northbound off-ramps from I-5 and local streets and roads in the project area under the build alternatives. As the table shows, compared to the No Build Alternative, the SD Alternative would: substantially increase volumes on the southbound off-ramp from I-5 and substantially reduce traffic volumes on Vilas Road.

#### DI Alternative

The DI Alternative is forecast to reduce ADT on existing OR 62 by over one-third compared to the No Build Alternative south of Delta Waters Road in both 2015 and 2035. North of Delta Waters Road to Corey Road, the DI Alternative would reduce ADT by over two-thirds. Between Gregory Road and OR 140, i.e., immediately north of the directional interchange at Agate Road, its impact on ADT would be similar to the SD Alternative's, for the same reason. The impact on ADT north of OR 140 would be similar to the SD Alternative's, as well.

Table 3.1-5 shows that the DI Alternative would substantially reduce traffic on Poplar Drive, and, like the SD Alternative, substantially reduce traffic volumes on Vilas Road.

**Latent demand** refers to cases where people avoid driving during certain times of the day or through certain areas in order to avoid congestion and delays. So long as congestion exists, those trips are re-scheduled. detoured, or not made at all, even though the desire to make the trips still exists. When transportation improvements are made, future traffic volumes include not only the traffic that is already using the corridor along with any incremental increase in traffic due to population growth, but also traffic that had been avoiding the corridor because of congestion.

**Figure 3.1-5** 

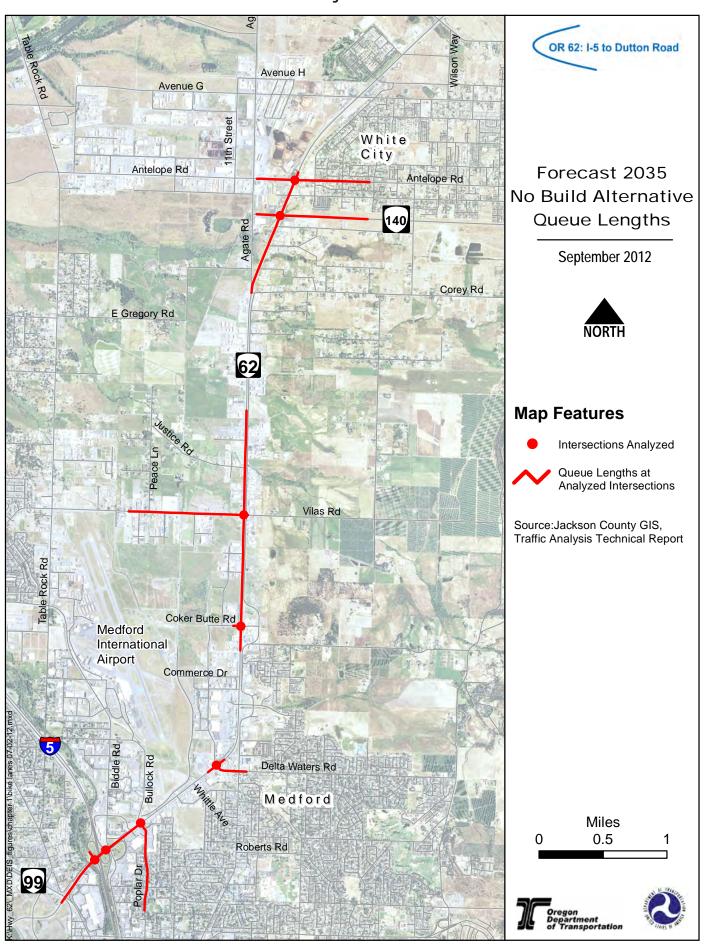
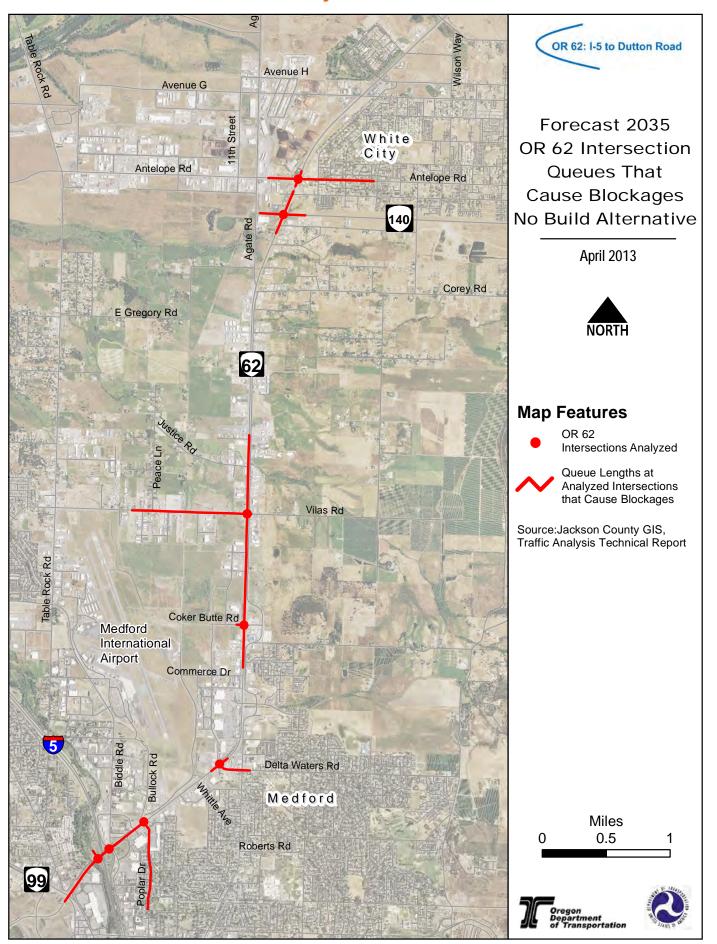


Figure 3.1-5 FEIS



#### **Traffic Congestion**

The build alternatives would substantially reduce traffic congestion in the project area. Table 3.1-8 compares traffic congestion under the No Build Alternative and build alternatives. The table lists standards from ODOT's Highway Design Manual (HDM), as well as the mobility performance targets from the OHP. Both the OHP targets and HDM standards apply when ODOT proposes a project. Table 3.1-8 shows that:

- The build alternatives would substantially reduce traffic congestion at all existing signalized intersections along existing OR 62 in the project area, except for the intersections at the I-5 off-ramps under the DI Alternative, where congestion would be virtually the same as under the No Build Alternative.
- At all but two signalized intersections on OR 62, forecast congestion levels would meet the applicable OHP performance target and HDM standard. The exceptions are the intersections of existing OR 62 with: the I 5 southbound off-ramps and OR 140. At the OR 140 intersection, congestion would be substantially less than under the No Build Alternative.
- In the SD Alternative, the v/c ratio at the intersection of the new ramp from I-5 northbound with the bypass northbound would violate the HDM standard in 2035, due to latent demand. Both ODOT and FHWA would have to approve exceptions to the HDM standard. The applications for these exceptions would state that the cost and environmental impacts of adding sufficient capacity to avoid violating the HDM standard are not considered to be justifiable. V/c ratios at other intersections built as part of the build alternatives would comply with the applicable HDM standard.
- In the DI Alternative, the v/c ratio at the southbound off-ramp from I-5 is slightly worse than under the No Build Alternative, due to latent demand. Both ODOT and FHWA would have to approve exceptions to the HDM standard. The applications for these exceptions would state that the cost and environmental impacts of adding sufficient capacity to avoid this are not considered to be justifiable.
- Congestion levels would meet the applicable City of Medford and Jackson County standards, except for the intersection of existing OR 62 and Antelope Road. City of Medford and Jackson County standards would apply because ODOT would transfer jurisdiction over existing OR 62 to the City of Medford and Jackson County.

Changes in the roadway system under the No Build Alternative and in the design of the Preferred Alternative have resulted in several changes to Table 3.1-8. An exclusive right-turn lane from existing OR 62 southbound to Bullock Road westbound has been added to the design of the Preferred Alternative, lowering the forecast v/c ratio at the intersection of OR 62 with Poplar Drive/Bullock Road. The addition of protected-permissive phasing for eastbound and westbound left-turn movements on Vilas Road at its intersection with OR 62, as described in Section 3.1.2.1, resulted in the lower v/c ratios there under the No Build Alternative in 2015 and 2035 and the lower v/c ratio under the Preferred Alternative in 2035. The protected-permissive phasing did not result in lower forecast v/c ratios under the Preferred Alternative in 2015. This is likely because forecast volumes are so low that minor traffic improvements have less effect than if volumes were higher. The project to add left-turn lanes from OR 140 westbound to OR 62 southbound referenced in Section 2.1.1 will slightly reduce the v/c ratios at the intersection of OR 140 and OR 62. (Note that the decline in the LOS under the Preferred Alternative, despite the lower v/c ratio, is an anomaly that resulted from how LOS is computed; v/c ratios are a more reliable measure of performance than LOS.) The substitution of a tight diamond interchange design for a SPUI at the interchange of the bypass and Vilas Road under the Preferred Alternative means there will be separate intersections for the northbound and southbound ramps, resulting in the addition of rows in Table 3.1-8 for each intersection.

Table 3.1-8 also shows that the build alternatives would reduce congestion at other signalized intersections in the project area, compared with the No Build Alternative. Violations of the City of Medford standard would remain at the intersection of Crater Lake Avenue and Delta Waters Road, but the LOS would be E, instead of F.

Table 3.1-8 Forecast Signalized Intersection Operations, No Build and Build Alternatives in 2015 and 2035

	Target or Sta	r Standard		N	Build Al	No Build Alternative	C)	(Pre	SD Alternative (Preferred/Alternative)	native ternativ	(e)		DI Alte	DI Alternative	
0D0T (V/C Ratio) Local		cal		2015	15	2035	35	2015	5	2035	5	2015	5	2035	35
OHP <sup>1</sup> HDM <sup>3</sup> Ratio LOS	V/C Ratio	501		V/C Ratio	507	V/C Ratio	507	V/C Ratio	507	V/C Ratio	S01	V/C Ratio	507	V/C Ratio	S01
0.85 0.75 NA			D	0.75	В	0.87	U	0.71	В	0.79	J	0.77	В	0.88	U
0.85 0.75 NA	NA		D <sub>4</sub>	69.0	В	0.75	В	0.63	В	0.70	В	0.70	В	0.77	U
0.85 NA NA	NA		D <sup>4</sup>	1.04	ш	1.05	Ŀ	0.82	O	0.93 <sup>6</sup> 0.85	O	NA <sup>7</sup>	NA <sup>7</sup>	NA <sup>7</sup>	NA <sup>7</sup>
0.85 NA NA	NA		D4	0.88	D	1.00		0.70	D	0.81	D	0.65	D	0.70	D
0.85 NA NA	NA		D4	0.99	O	1.38	ш.	0.44	J	0.56	J	0.40	)	0.49	J
0.85 NA NA	NA	-	D <sub>4</sub>	0.70	D	0.92		0.53	D	0.62	D	0.47	D	0.53	D
0.85 NA NA	NA		₽	0.75	В	0.88	J	0.42	U	0.51	U	0.37	U	0.45	U
0.85 0.75 0.95	0.95		D <sub>5</sub>	1.00	O	1.54	щ	0.82	J	1.04	D E	0.81	J	1.06	O
	0.95		Ds	0.84	D	1.04	ட	0.73	U	0.93	ш	0.79	D	0.95	ш
0.85 NA 0.95	0.95	_	Ω	69.0	В	0.89	U	0.47	Ω	0.57	8	0.46	В	0.56	В
0.85 NA 0.95	0.95		٥	0.72	8	0.88	J	0.37	A	0.59	8	0.35	A	0.44	8
1			2	414	414	414			417	2.0	4	14.0	414	0	414
0.75	A S		ے کے	NA	NA S	NA S	NA	0.44	NA :	0.52	NA :	0.45	NA	0.50	NA
0.85 <sup>2</sup> 0.75 NA	AN AN		ر اح	NA N	AN N	A N	N N	0.34	¥ X	0.41	¥ ¥				
0.75	N A		4	¥	N A	N A	NA	0.63	NA	0.83	¥	NA	NA	NA	AM
NA NA NA	NA		D4	NA	D	NA		NA	D	NA	ш	NA	ш	NA	ш
NA NA 0.95 <sup>5</sup>	0.95 <sup>5</sup>		Ds	0.52	В	0.65	В	NA	NA	NA	NA	NA	NA	NA	NA
NA	0.95 <sup>5</sup>		Ds	0.63	В	0.76	C	0.48	В	0.48	В	0.41	В	0.45	В
NA NA 0.95 <sup>5</sup>	0.955		D4	0.94	D	1.31	ш	0.92	O	0.85	٥	0.97	ш	0.00	O
NA NA 0.95 <sup>5</sup>	0.95		D⁴	0.72	U	1.01	O	0.73	J	0.98 0.96	Q	0.63	J	0.97	O
	FOGO	-	-	11.10.00						00.0	-			3	

Note: Cells shaded black indicate that the v/c ratio or LOS exceeds the applicable ODOT performance target, ODOT Highway Design Manual standard, or Medford or Jackson County standard. Under the SD and DI Alternatives, Gity of Medford and Jackson County standards would apply to intersections on existing OR 62 other than the intersection with OR 140, because ODOT would transfer ownership of the highway to them. Oregon Highway Plan. The 0.85 target applicable to most intersections is based on the classification of OR 62 as a "Freight Route on a Statewide Highway" and "Statewide Expressway" and location within a metropolitan planning organization area inside an urban growth boundary. See Table 6 of the OHP, as amended December 21, 2011.

<sup>&</sup>lt;sup>2</sup> Target is based on OHP Action 1F.1. See the language beginning on line 20 of page 8 of the amendments adopted December 21, 2011.

<sup>3</sup> ODOT Highway Design Manual.

<sup>&</sup>lt;sup>4</sup>City of Medford standard.

Not shaded because the City of Medford does not have a v/c ratio standard <sup>5</sup> Jackson County standard.

<sup>&</sup>lt;sup>7</sup>The DI Alternative would eliminate this intersection.

The build alternatives would avoid the congestion at most unsignalized intersections that would occur under the No Build Alternative, described in Section 3.1.3.1, except for the intersection of Crater Lake Avenue with Owens Drive, which is forecasted to have a v/c ratio of over 2.0 and a LOS of F in both 2015 and 2035.

The effects of the build alternatives on congestion are similar. The differences between the two alternatives are that:

- Under the DI Alternative, congestion at the I-5 southbound ramp ends would exceed the OHP mobility performance target in 2035, but the SD Alternative does not.
- As stated above, under the SD Alternative, congestion at the I-5/bypass northbound on-ramp intersection would violate the HDM standard in 2035. The DI Alternatives does not include this intersection.
- Under the DI Alternative, congestion at the intersection of Crater Lake Avenue with Delta Waters Road would exceed the City of Medford standard in 2015, but not under the SD Alternative.

#### **Speed and Travel Time**

Average speeds on the bypass under the build alternatives would be higher than average speeds on existing OR 62 under the No Build Alternative, and average travel times for the build alternatives would be lower. The positive effects of the SD Alternative on average speeds and travel times would be greater than the positive effects of the DI Alternative.

#### As Table 3.1-9 shows:

- In 2015, the SD Alternative is forecast to increase average speed by 20 to 23
  mph, or 83 to 115 percent, depending on direction, compared to the No Build
  Alternative. The SD Alternative is forecast to reduce travel time by 8 to 11 minutes,
  or by 40 to 48 percent.
- In 2015, the DI Alternative is forecast to increase average speed by 14 to 16 mph, or 67 to 70 percent, depending on direction, compared to the No Build Alternative. The DI Alternative is forecast to reduce travel time by 9 minutes, or by 39 to 45 percent.

Table 3.1-9 Forecast Travel Time and Average Speed, No Build and Build Alternatives

	N	o Build A	lternativ	e	(Pi		rnative Alternativ	re)	DI Alternative			
	20	15	20	35	20	15	20	35	20	15	20	35
	Travel Time (mins.)	Av. Speed (mph)										
Travel Time and Speed												
I-5 to Dutton Road (Northbound)	23 26	20 18	32 30	15 16	12	43 44	13	38 39	14	34	16	31
Dutton Road to I-5 (Southbound)	20 19	24 25	29 28	17	12	44	13	40	11	40	12	38
Change from No Build Alternat	ive											
I-5 to Dutton Road (Northbound) Source: Traffic Analysis , August 2011.					-11 -14	+23 +20	-19 -17	+23	-9	+14	-16	+16
Dutton Road to I-5 (Southbound)					-8 -7	+20 +19	-16 -15	+23	-9	+16	-17	+21
Percent Change from No Build	Alternative											
I-5 to Dutton Road (Northbound)					-48 -54	+115 +144	-59 -57	+153	-39	+70	-50	+107
Dutton Road to I-5 (Southbound)					-40 -37	+83 +76	-55 -54	+135	-45	+67	-59	+124

- In 2035, the SD Alternative is forecast to increase average speed by 23 mph, or 135 to 153 percent higher, depending on direction, compared to the No Build Alternative. The SD Alternative is forecast to reduce travel time by 16 to 19 minutes, or by 55 to 59 percent.
- In 2035, the DI Alternative is forecast to increase average speed by 14 to 17
  mph, or 107 to 124 percent, depending on direction, compared to the No Build
  Alternative. The DI Alternative is forecast to reduce travel time by 16 to 17 minutes,
  or by 50 to 59 percent.

The project to add left-turn lanes from OR 140 westbound to OR 62 southbound referenced in Section 2.1.1 will alter travel times and speeds under the No Build and Preferred Alternatives and how they compare, as shown in Table 3.1-9.

#### **Queuing and Blocking**

The build alternatives would reduce the number of queuing blockages, as defined in Section 3.1.3.1. Compared to the No Build Alternative, in 2015, the SD Alternative would reduce the number of these locations from 36 to 11. The DI Alternative would reduce the number of locations to seven. In 2035, the SD Alternative would reduce the number of locations to 25 compared to 43 under the No Build Alternative. The DI Alternative would reduce the number of locations to 12. Under both build alternatives, most of the remaining queuing blockages would be at the intersections of existing OR 62 with OR 140 and Antelope Road in White City. This is because of latent demand traffic the build alternatives would attract to existing OR 62 in White City. Both of the build alternatives also would substantially reduce queuing and blocking problems at other area intersections, such as on Crater Lake Avenue and Delta Waters Road. For lists of queuing and blocking problem locations under the SD and DI Alternatives in 2015 and 2035, see Tables 5-5, 5-6, 5-13, and 5-14 of the Traffic Analysis, which is available from the ODOT contact person identified on page i of this DEIS.

The changes in the roadway system under the No Build Alternative and in the design of the Preferred Alternative will also alter the numbers of queuing blockages under the Preferred Alternative. These changes are the addition of an exclusive right-turn lane from OR 62 southbound to Bullock Road westbound under the Preferred Alternative, the addition of protective-permissive phasing for eastbound and westbound left-turn movements on Vilas Road at its intersection with OR 62, and the addition of left-turn lanes from OR 140 westbound to OR 62 southbound referenced in Section 2.1.1. Compared to the No Build Alternative, in 2015, the Preferred Alternative will reduce the number of queuing blockages from 36 to 10. In 2035, while the length of some forecast queues have changed, the number of forecast queuing blockages under the Preferred Alternative remains 25, compared to 45 under the No Build Alternative.

#### **Traffic Safety**

The build alternatives would reduce crashes compared with the No Build Alternative by diverting traffic onto the limited-access bypass. Limited-access highways¹ have much lower crash rates than highways that are not access-controlled, like existing OR 62, so diverting traffic to the bypass would reduce crashes. ² In addition, the lower traffic volumes on existing OR 62 would reduce crashes by reducing congestion at intersections, providing larger gaps for traffic turning onto or from local streets and driveways, and reducing the number of intersections and driveways blocked by traffic queues. The DI Alternative may reduce crash rates more than the SD Alternative because the DI Alternative would reduce traffic volumes on existing OR 62 by more than the SD Alternative in the southern part of existing OR 62, where the existing crash rate is highest. Tables 1-2, 1-3 provide a summary of crash rates and types. Table 3.1-4 provides a summary of existing and forecast traffic volumes. In addition, the reduction in intersections blocked by traffic queues would be greater under the DI Alternative than under the SD Alternative, as previously described in this section.

<sup>&</sup>lt;sup>1</sup> Limited-access highways are highways with either no or limited numbers of intersections and no access to or from driveways.

<sup>&</sup>lt;sup>2</sup> In Oregon in 2009, the crash rate on interstate freeways, which are fully access-controlled, was 0.38 per million vehicle miles travelled (MVMT); the crash rate on other freeways and expressways, which are mostly access-controlled, was 0.61 per MVMT; and the crash rates on all other roadways, which are not access controlled, was 1.22 per MVMT.

#### **Freight**

Along with other motor vehicle traffic, freight traffic on OR 62 would benefit from the reductions in congestion, lane and intersection blockages, and crashes described above. Freight traffic, which would represent approximately 5 to 6 percent of the overall traffic on the bypass, would benefit from reductions in congestion, decreased travel time, and fewer speed changes, which, in turn, reduce the frequency of crashes. These benefits are the same for vehicular traffic, but are compounded for freight traffic because freight traffic takes longer to slow down in congestion and to resume speed from a stopped position. Freight traffic would benefit even more than passenger cars from uninterrupted, free flow conditions, which would occur for most of the bypass' length. Except in the event of crashes, potential disruptions to travel would occur at only two locations between the north and south termini: the interchanges at Agate and Vilas Roads. In addition, the SD Build Alternative would provide a direct connection between the bypass and I-5, avoiding travel on existing OR 62 at the south terminus. Local freight traffic on existing OR 62 would benefit from lower volumes, reduced congestion, and reduced overall travel times.

#### **Compliance with the ADA**

The build alternatives would be designed to comply with current ADA standards. Where a build alternative would alter local streets, the project would build ADAcompliant sidewalks, including ADA-compliant ramps at crosswalks. Similarly, the bypass would be ADA-compliant, including at entrances to the bypass from local roads with sidewalks.

#### **Medford Airport**

Under the build alternatives, operational impacts could occur as a result of slight incursion into the southeast corner of the RPZ, as shown in Figure 3.1-4. The magnitude of this impact would be determined by a Federal Aviation Administration (FAA) evaluation of the effects on airport operations through submission of Form 7460-1 to the FAA. In addition, the closure of Commerce Drive would remove the existing access to the USCIS facility on the east side of the airport. As described in section 2.1.2.3, the build alternatives would provide a new access route to the USCIS facility from Vilas Road.

As stated in Chapter 2, under the Preferred Alternative, Commerce Drive will be extended under the bypass to retain the existing access to the USCIS facility and a new access to the facility from Vilas Road will not be provided. The bypass will be elevated where it crosses over Commerce Drive. As stated in Section 3.1.2.5, the Medford Airport has abandoned the airport's shorter 27 runway, so the RPZ associated with the 27 runway no longer exists. Therefore, notification to the FAA of the elevated overcrossing of Commerce Drive will not be necessary.

## **Construction Impacts**

Project construction would cause disruptions to all travel modes. Because the alternatives are bypasses, most of these disruptions would be at the four interchanges, where construction would alter existing roadways. Construction activities would be contained within delineated work zones for the safety of both the public and construction personnel. Temporary lane closures on existing roads for intersection reconstruction and rerouting of traffic may be necessary, depending on traffic volumes. Overpass construction where traffic is present may require temporary suspension of traffic during overhead lifting, placement of bridge structure elements, and when the work may present a danger to the public. This would be allowed only during low traffic volume periods, generally at night. The principal differences between the alternatives would be at the southern terminus interchange, where the DI Alternative would cause substantially more disruption than the SD Alternative because the DI Alternative includes more changes to local roadways.

#### 3.1.3.3 JTA Phase

As with the build alternatives, the design options are not addressed in the discussion below because the impacts of the JTA phase on traffic operations, performance, and safety would be same, regardless of which design option is selected.

### **Transportation System**

Section 2.1.3 describes the transportation system improvements under the JTA phase, including the interchange, roadway, and pedestrian facility improvements that would be made. The effects on traffic operations, performance, and safety are described below. As with the build alternatives, bicyclists and pedestrians would be able to use the bypass by accessing it at interchanges. The reduced volumes on existing OR 62 described below would improve conditions for bicyclists and pedestrians. Transit service would be the same as under the No Build Alternative, as described above. However, transit users would benefit from the reduced congestion on existing OR 62 described below in the same way that motorists would benefit.

The JTA phase would not necessitate the rerouting of OR 140 west of OR 62, as would the build alternatives, as described in section 3.1.3.2.

#### **Traffic Operations and Performance**

As with the build alternatives, the impacts of the JTA phase on traffic operations and performance would result from the diversion of traffic from existing OR 62 and the attraction of latent demand to the bypass and OR 62. However, the JTA phase is a smaller section of the overall project and, therefore, would not have the same draw that the full build alternatives would have. As a result, less traffic would divert to the bypass under the JTA phase and less latent demand would be drawn into the corridor.

#### **Traffic Volumes**

As Table 3.1-10 shows, the JTA phase is forecast to reduce ADT on existing OR 62 by over one-third compared to the No Build Alternative south of Delta Waters Road in both 2015 and 2035. North of Delta Waters Road to Corey Road, the JTA phase would reduce ADT by over one-half. Between Gregory Road and OR 140, i.e., immediately north of the northern intersection of the bypass with existing OR 62, the JTA phase is forecast to increase ADT compared to the No Build Alternative, by 15 percent in 2015 and by 20 percent in 2035. This is because the JTA phase would attract latent demand traffic into the corridor, although the JTA phase would not attract as much latent demand as the build alternatives, for the reasons in the preceding paragraph. North of OR 140, the JTA phase is forecasted to have very little effect on ADT.

As Table 3.1-11 shows, the JTA phase is forecast to have only small impacts on traffic volumes on the off-ramps from I-5 and local streets and roads in the project area.

Table 3.1-10 Existing and Forecast Average Daily Traffic Volumes, Bypass and OR 62, JTA Phase

	Existing	No Build	Alternative	JTA Phase		
Segment	2007	2015	2035	2015	2035	
Bypass						
South Terminus Interchange to Vilas Rd SPUI	N/A	N/A	N/A	N/A	N/A	
Vilas SPUI to Agate Directional	N/A	N/A	N/A	27,400	34,100	
Agate Directional to North Terminus Directional	N/A	N/A	N/A	N/A	N/A	
South Terminus Interchange to North Terminus Signal	N/A	N/A	N/A	27,400	34,100	
OR 62						
Whittle Rd to Delta Waters Rd	47,700	51,200	57,800	31,800	37,500	
Delta Waters Rd to Corey Rd	42,000	44,800	54,300	19,900	24,300	
Gregory Rd to OR 140	34,400	39,000	47,400	44,700	56,800	
OR 140 to Dutton Rd	25,900	29,500	40,000	29,500	41,700	
		Change fi	Change from Existing		Build Alternative	
Whittle Road to Delta Waters Rd		+3,500	+10,100	-19,400	-20,300	
Delta Waters Rd to Corey Rd		+2,800	+12,300	-24,900	-30,000	
Gregory Rd to OR 140		+4,600	+13,000	+5,700	+9,400	
OR 140 to Dutton Rd		+3,600	+14,100	0	+1700	
		Percent Chan	ge from Existing		e from No Build native	
Whittle Road to Delta Waters Rd		7	21	-38	-35	
Delta Waters Rd to Corey Rd		7	29	-56	-55	
Gregory Rd to OR 140		13	38	+15	+20	
OR 140 to Dutton Rd		14	54	0	+4	

Note: Volumes are averages and are rounded to the nearest 100. Source: Southern Oregon Transportation Engineering, LLC.

Table 3.1-11 Existing and Forecast Average Daily Traffic Volumes, I-5 Off-Ramps and Local Streets and Roads, JTA Phase

	Existing	No Build A	Iternative	JTA P	hase	
Segment	2007	2015	2035	2015	2035	
I-5 Southbound Off-Ramp	7,500	8,400	11,700	8,900	11,700	
I-5 Northbound Off-Ramp	14,700	15,300	16,300	15,100	16,100	
Poplar Drive	18,300	18,800	19,000	19,250	19,600	
Delta Waters Road	16,200	15,200	17,000	15,300	16,600	
Coker Butte Road	4,200	6,400	8,600	7,400	9,000	
Vilas Road	15,100	19,800	26,000	20,900	26,100	
OR 140	9,600	11,000	14,900	11,000	15,000	
		Change fro	m Existing		m No Build native	
I-5 Southbound Off-Ramp		+900	+4200	+500	0	
I-5 Northbound Off-Ramp		+600	+1600	-200	-200	
Poplar Drive		+500	+700	+450	+600	
Delta Waters Road		-1000	+800	+100	-400	
Coker Butte Road		+2,200	+4,400	+1,000	+400	
Vilas Road		+4,700	+10,900	+1,100	+100	
OR 140		+1,400	+5,300	0	+100	
		Percent Ch Exist		Percent Change from No Build Alternative		
I-5 Southbound Off-Ramp		+12	+56	+6	0	
I-5 Northbound Off-Ramp		+4	+11	-1	-1	
Poplar Drive		+3	+4	+2	+3	
Delta Waters Road		-6	+5	0	-2	
Coker Butte Road		+52	+105	+16	+5	
Vilas Road		+31	+72	+5	0	
OR 140		+15	+55	0	0	

Note: Note: Volumes are at locations near OR 62 and are rounded to the nearest 100.

Source: Southern Oregon Transportation Engineering, LLC.

## **Traffic Congestion**

Table 3.1-12 compares traffic congestion for the No Build Alternative and the JTA phase. Table 3.1-12 shows that:

- The JTA phase would reduce traffic congestion at all existing signalized intersections along existing OR 62 north of the Poplar Drive/Bullock Road intersection.
- Congestion at the intersections of OR 62 with the I-5 ramps would be virtually the same as under the No Build Alternative.

Table 3.1-12 Forecast 2015 and 2035 Signalized Intersection Operations, JTA Phase

	Target or Standard			No Build Alternative				JTA Phase				
	ODOT (V/C Ratio)		Local		2015		2035		2015		2035	
Intersection	OHP <sup>1</sup>	HDM <sup>3</sup>	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS
OR 62 Intersections												
I-5 Southbound Off-Ramp	0.85	0.75	NA	D	0.75	В	0.87	C	0.77	В	0.88	C
I-5 Northbound Off-Ramp	0.85	0.75	NA	D <sup>4</sup>	0.69	В	0.75	В	0.69	В	0.76	В
Poplar Drive/Bullock Road	0.85	0.75	NA	D <sup>4</sup>	1.04	Е	1.05	F	0.90	D	1.06	E
Delta Waters Road	0.85	NA	NA	D <sup>4</sup>	0.88	D	1.00	E	0.66 0.67	C	0.71	D
Owens Drive/OR 62	0.85	NA	NA	D <sup>4</sup>	0.70	D	0.92	Е	0.50	D	0.61	D
Coker Butte Road/OR 62	0.85	NA	NA	D <sup>4</sup>	0.75	В	0.88	C	0.36	В	0.47	В
Vilas Road	0.85	NA	NA	D <sup>4</sup>	0.99 0.75	D	1.38 1.36	F	0.79 0.75	C D	0.95 0.94	D
OR 140	0.85	0.75	0.95	D <sup>5</sup>	1.00 0.94	D	1.54 1.48	F	0.86 0.95	C E	1.14 1.57	F
Antelope Road	0.85	0.80	0.95	D <sup>5</sup>	0.84	D	1.04	F	0.91	D	1.08	F
Avenue G	0.85	0.80	0.95	D⁵	0.69	В	0.89	C	0.70	В	0.87	В
Avenue H/VA SORCC	0.85	0.80	0.95	D <sup>5</sup>	0.72	В	0.88	C	0.68	В	0.88	C
Bypass												
Bypass/OR 62	0.85	0.75	0.95	D⁵	NA	NA	NA	NA	0.71 0.73	В	0.84 0.86	С
Other Intersections												
Crater Lake Avenue/Delta Waters Road	NA	NA	NA	D <sup>4</sup>	NA	D	NA	F	NA	D	NA	D
Agate Road/Antelope Road	NA	NA	0.95⁵	D⁵	0.52	В	0.65	В	0.52	В	0.61	В
Table Rock Road/Antelope Road	NA	NA	0.95⁵	D⁵	0.63	В	0.76	C	0.58	В	0.71	В
Table Rock Road/Vilas Road	NA	NA	0.95⁵	D <sup>4</sup>	0.94	D	1.31	F	0.91	D	1.19 1.14	E
Table Rock Road/Biddle Road	NA	NA	0.95⁵	D <sup>4</sup>	0.72	C	1.01	D	0.67	C	0.97	D

Note: Cells shaded black indicate that the v/c ratio or LOS exceeds the applicable ODOT performance target, ODOT Highway Design Manual standard, or Medford or Jackson County standard. Under the JTA phase, City of Medford and Jackson County standards would apply to intersections on existing OR 62 north of Poplar Drive/Bullock Road and south of the intersection with the bypass.

Source: Traffic Analysis, August 2011, with edits to reflect December 21, 2011, amendments to the OHP.

<sup>&</sup>lt;sup>1</sup>Oregon Highway Plan. The 0.85 target applicable to most intersections is based on the classification of OR 62 as a "Freight Route on a Statewide Highway" and "Statewide Expressway" and location within a metropolitan planning organization area inside an urban growth boundary. See Table 6 of the OHP, as amended December 21, 2011.

<sup>&</sup>lt;sup>2</sup> Target is based on OHP Action 1F.1. See the language beginning on line 20 of page 8 of the amendments adopted December 21, 2011.

<sup>&</sup>lt;sup>3</sup> ODOT Highway Design Manual.

<sup>&</sup>lt;sup>4</sup>City of Medford standard.

<sup>&</sup>lt;sup>5</sup>Jackson County standard.

- At the intersection of OR 62 with Poplar Drive and Bullock Road, the JTA phase would reduce congestion in 2015 compared to the No Build Alternative, but, by 2035, congestion would be slightly worse than under the No Build Alternative.
- By 2035, forecast congestion levels would fail to meet the target or standard at all intersections on existing OR 62 to which the OHP mobility performance target or HDM standard would apply. At the intersection of OR 62 with OR 140, congestion would be substantially less than under the No Build Alternative. However, congestion would be worse at the intersection of OR 62 and Antelope Road. While the JTA phase attracts latent demand traffic into the corridor, unlike the build alternatives, the JTA phase does not divert traffic from existing OR 62 by providing an alternative route all the way to Dutton Road. In addition, the JTA phase does not include adding capacity at the intersections of OR 62 and OR 140 or Antelope Road.
- Congestion levels would decline at all signalized intersections subject only to City of Medford or Jackson County jurisdiction, including the intersections of existing OR 62 with Delta Waters Road and Vilas Road. Congestion at these intersections would meet the applicable City of Medford and Jackson County standards, except at the intersection Table Rock Road and Vilas Road.

The project to add left-turn lanes from OR 140 westbound to OR 62 southbound referenced in Section 2.1.1 will alter v/c ratios in Table 3.1 12. Table 3.1 12 shows the revised ratios in orange. The observations in the preceding bullet list remain valid, with the following exceptions.

- The JTA phase will reduce traffic congestion at all existing signalized intersections along existing OR 62 north of the Poplar Drive/Bullock Road intersection, except at the intersection of OR 140 and OR 62. The higher v/c ratios at the intersection of OR 140 and OR 62, compared to the forecasts in the DEIS, result from the planned removal of the right-turn lane from Leigh Way eastbound to OR 62 southbound, compared to what was assumed in the traffic forecast for the DEIS. While the intersection improvement project referenced in Section 2.1.1 will add left-turn lanes from OR 140 westbound to OR 62 southbound, it will include only one lane for the through and right-turn movements from Leigh Way eastbound. There is a separate right-turn lane at the intersection today.
- For the same reason, at the intersection of OR 62 with OR 140, congestion under the JTA phase in both 2015 and 2035 will be worse than under the No Build Alternative.

In a project scheduled for 2014, ODOT will add one new westbound left-turn lane at the intersection of OR 62 with OR 140 and change the configuration of the exclusive eastbound right-turn lane to a shared through and right-turn lane. The addition of the left-turn lane is intended to avoid crashes that now occur between eastbound through vehicles and westbound vehicles turning left from the westbound through lane. Removal of the exclusive eastbound right-turn lane is necessary to align lanes across the intersection. As stated in Section 3.1.2.1, the proposed OR 140 Corridor Plan calls for an eastbound right-turn lane on Leigh Way. This improvement is not in the RTP and is therefore not reflected in the traffic forecasts conducted for this FEIS. However, the improvement is expected to be made in the future to avoid the high v/c ratio forecast in 2035 under the JTA Phase

#### **Speed and Travel Time**

Average speeds on the bypass under the JTA phase would be higher than average speeds on existing OR 62 under the No Build Alternative, and average travel times would be lower. Table 3.1-13 shows that:

- In 2015, the JTA phase is forecast to increase average speed by 9 to 12 mph, or 45 to 50 percent, depending on direction, compared to the No Build Alternative. The JTA phase is forecast to reduce travel time by 7 to 8 minutes, or by 30 to 40 percent.
- In 2035, the JTA phase is forecast to increase average speed by 4 to 6 mph, or by 27 to 35 percent, depending on direction, compared to the No Build Alternative. The JTA phase is forecasted to reduce travel time by 9 to 10 minutes, or 28 to 34 percent.

Table 3.1-13 Forecast Travel Time and Average Speed in 2015 and 2035, JTA Phase

	ı	lo Build A	lternative	JTA Phase								
	20	15	20	35	20	15	2035					
	Travel Time	Av. Speed	Travel Time	Av. Speed	Travel Time	Av. Speed	Travel Time	Av. Speed				
	(mins.)	(mph)	(mins.)	(mph)	(mins.)	(mph)	(mins.)	(mph)				
Travel Time and Speed												
I-5 to Dutton Road (Northbound)	23 26	20 18	32 30	15 16	16 18	29 24	23 25	19 15				
Dutton Road to I-5 (Southbound)	20 19	24 25	29 28	17	12 13	36 29	19 18	23 24				
Change from No Build Alternative												
I-5 to Dutton Road (Northbound)					-7	+9 +6	-9 -5	+4 -1				
Dutton Road to I-5 (Southbound)					-8 -6	+12 +4	-10	+6 +7				
Percent Change from No Build Alternative												
I-5 to Dutton Road (Northbound)					-30	+45 +33	-28 -17	+27 -6				
Dutton Road to I-5 (Southbound)					-40 -32	+50 +16	-34	+35 +41				

Source: Traffic Analysis, August 2011.

The project to add left-turn lanes from OR 140 westbound to OR 62 southbound referenced in Section 2.1.1 will alter the numbers in the preceding paragraph. Table 3.1 13 shows the revised numbers in orange. The reductions in the benefits of the JTA phase result from the removal of the eastbound right-turn lane as part of planned improvements to the intersection of OR 62 and OR 140 that are intended to achieve both capacity and safety purposes. The proposed OR 140 Corridor Plan calls for an eastbound right-turn lane on Leigh Way. Restoration of the exclusive right-turn lane would avoid the reduction in benefits.

#### **Queuing and Blocking**

In the short term, but not the long term, the JTA phase would reduce the number of queuing blockages. Compared to the No Build Alternative, in 2015, the JTA phase would reduce these locations from 36 to 29. However, by 2035, the number of queuing blockages under the JTA phase would be the same as under the No Build Alternative.

Changes in the roadway system under the No Build Alternative described in Section 3.1.3.1 will alter the numbers of queuing blockages under the JTA phase in the preceding paragraph. These changes are the addition of protective-permissive phasing for eastbound and westbound left-turn movements on Vilas Road at its intersection with OR 62 and the addition of left-turn lanes from OR 140 westbound to OR 62 southbound referenced in Section 2.1.1. Compared to the No Build Alternative, in 2015, the Preferred Alternative will reduce the number of queuing blockages from 36 to 26, and in 2035, the Preferred Alternative will reduce the number of queuing blockages from 45 to 29.

## **Traffic Safety**

The JTA phase would reduce crashes on existing OR 62, but not by as much as the build alternatives. Diverting traffic to the bypass would reduce crashes because access-controlled highways have much lower crash rates than highways that are not access-controlled, like existing OR 62. In addition, as Table 3.1-4 shows, the JTA phase would reduce volumes south of Delta Waters Road, where crash rates are highest, by nearly as much as the DI Alternative and more than the SD Alternative.

The JTA phase would also reduce volumes by over one-half between Delta Waters Road and Corey Road. However, the JTA phase would not reduce congestion by as much as the build alternatives and, by 2035, the number of blockages under the JTA phase would be the same as under the No Build Alternative.

#### **Compliance with the ADA**

As with the build alternatives, the JTA phase would be designed to comply with current ADA standards.

#### Freight

With the JTA phase, as with the build alternatives, motor vehicle traffic and freight traffic on OR 62 would benefit from the reductions in congestion, lane and intersection blockages, and crashes. Freight traffic on the bypass would benefit from uninterrupted, free-flow traffic conditions between the north terminus and south terminus. In addition, the on-ramp from Agate Road at the northern terminus would benefit southbound freight traffic from OR 140 and White City by enabling that traffic to avoid congestion on existing OR 62 between the intersection with OR 140 and the bypass. Local freight traffic on existing OR 62 would benefit from lower volumes and reduced congestion, which would reduce travel times.

#### **Medford Airport**

Impacts from constructing the JTA phase would be the same as impacts under the build alternatives, as described in the discussion of the Medford Airport in Section 3.1.3.2.

#### **Construction Impacts**

Project construction would cause disruptions to all travel modes and minor disruptions to property access. Because the JTA phase is a bypass, most of these disruptions would be at the southern terminus interchange and, to a lesser extent where the bypass would cross over Vilas Road and at the northern terminus intersection. Although reduced in scale, the construction impacts would be similar to the impacts of the build alternatives, as described in Section 3.1.3.2.

# 3.1.4 Avoidance, Minimization, and/or Mitigation Measures

## 3.1.4.1 Project Design

## Measures Incorporated into the Build Alternatives and JTA Phase

Prior to construction of the build alternatives, ODOT and the City of Medford and Jackson County must prepare Interchange Area Management Plans (IAMPs) and adopt relevant portions to ensure the regional and statewide mobility function of the new bypass and interchanges.

Each IAMP needs to be tailored to address the unique land use and operational and safety challenges at each interchange. Specific operational issues that should be addressed within each IAMP include:

**South Terminus** (either the split diamond interchange under the SD Alternative or the directional interchange between the new bypass and existing OR 62 under the DI Alternative): Maintaining mobility standards along Biddle Road west of the interchange and along OR 62 near the interchange ramps.

**Vilas Road** (the interchange at Vilas Road): Maintaining adequate mobility near the interchange and on existing OR 62. Special consideration may be needed at the intersections of Vilas Road with existing OR 62 and Table Rock Road.

**Agate Road** (the directional interchange between the bypass and existing OR 62 in the vicinity of Agate Road): Maintaining adequate mobility along OR 62 north of the interchange to the intersection of OR 140 and existing OR 62. This area may require consideration of access management to address mobility.

**Dutton Road** (the directional interchange between the bypass and existing OR 62 at the northern terminus near Dutton Road): Ensuring compatible land uses that support the function of the bypass at the northern terminus and to maintain adequate mobility on the bypass.

ODOT has prepared an access management strategy (AMS) for the southern terminus interchange under the JTA phase, which would guide access decisions in project implementation. The AMS provides for the closure, consolidation, or modification of most driveway and local street connections to OR 62 at or near the interchange. This would improve mobility and reduce crashes at the southern terminus interchange. ODOT plans to prepare a similar AMS for the northern terminus intersection.

Other measures incorporated into the design of the build alternatives and JTA phase are:

- Providing a new access road for the private business and USCIS operations along the eastern edge of the airport property would mitigate for the closure of the access road from Commerce Drive. This new access road would be located off of Vilas Road.
- Allowing bicycles and pedestrians on the shoulders of the bypass.

As described in Chapter 2, the Preferred Alternative and JTA Phase have been changed to include an extension of Commerce Drive under the bypass to retain the existing access to the USCIS facility and businesses on the eastern edge of the airport. This obviates providing alternative access and, therefore, access to the USCIS facility and businesses from Vilas Road will not be provided as part of the project.

### **Additional Potential Mitigation Measures**

#### **Traffic Operations and Performance**

The City of Medford should install a traffic signal at the intersection Crater Lake Avenue and Owens Drive. As described in Section 3.1.3.2, the intersection is forecast to have a v/c ratio of over 2.0 and a LOS of F in both 2015 and 2035. At one time, the RTP included installing a traffic signal at this intersection, but doing so was later removed from the RTP.

#### **Alternative Travel Modes**

ODOT has organized a Transit Committee that has made recommendations for measures to improve alternative modes of travel along and near existing OR 62. Committee members are listed in Table 7-10. Appendix M contains the committee's recommendations. The measures would improve conditions for pedestrians and bicyclists, and improve transit service. The measures are recommendations. Inclusion of a measure in the list does not mean that ODOT has committed to implementing it or that ODOT is the appropriate entity to fund or implement the measure. In addition to the measures in Appendix L, ODOT would consider providing striping for bicycles on the bypass.

#### **Airport Impacts**

Mitigation for operational issues arising from the incursion into the RPZ could include design changes to the build alternatives that would minimize the placement of objects within this zone. These possible changes would occur through collaboration between ODOT, FAA and Medford Airport management.

## 3.1.4.2 Project Construction

For both the build alternatives and the JTA phase, ODOT would prepare a Traffic Management Plan for project construction. The Traffic Management Plan would provide for detours, flaggers, time of day lane closure restrictions, weekend closure restrictions, staging plans, detour identification, ADA compliance, and provision of local access considerations. ODOT would also prepare a public involvement plan to inform and engage those affected by project construction. This plan would include a project website to provide current information on construction activities.

# 3.1.5 Avoidance, Minimization, and/or Mitigation **Commitments Incorporated into the Preferred Alternative**

ODOT makes the following commitments.

### 3.1.5.1 Project Design

#### **JTA Phase**

- To guide access decisions in implementation of the JTA Phase, ODOT will prepare an AMS for the northern terminus intersection, which will be similar to the AMS ODOT has prepared for the southern terminus interchange. The AMS for the southern terminus interchange provides for the closure, consolidation, or modification of most driveway and local street connections to OR 62 at or near the interchange. This will improve mobility and safety to reduce crashes at the southern terminus interchange.
- The project design allows U-turns on OR 62 at Poplar Drive/Bullock Road under the JTA phase.
- The project design removes the intersections of Gregory Road and Corey Road with existing OR 62 and replaces them with an intersection of Fowler Lane and existing OR 62 to increase spacing between OR 62 intersections and reduce congestion between the north terminus intersection of the bypass with existing OR 62 and the intersection of OR 62 with OR 140.
- The project design realigns Crater Lake Avenue near the northern terminus to separate the intersections of Fowler Lane with Crater Lake Avenue and existing OR 62.
- The project design includes gates at the cul-de-sacs where Justice Road terminates on both the east and west sides of the bypass to allow emergency vehicles to enter or leave the bypass, providing for better emergency response times.
- The project design provides for bicycle access to and egress from the bypass at the north and south termini.

#### JTA Phase and Preferred Alternative Subsequent to Construction of the JTA Phase

- ODOT will allow bicycles and pedestrians on the shoulders of the bypass. The shoulders of the bypass will not be striped because, under Oregon State law, striping for bicycles prohibits pedestrian use and the intent is to allow use by both pedestrians and bicyclists.
- ODOT will convene a committee beginning in early 2013 to discuss implementation of projects recommended by the Transit Subcommittee listed in Appendix M, Recommendations for Transit and Non-Motorized Transportation.
- ODOT will mitigate for operational issues arising from the incursion into the RPZ, including design changes to the Preferred Alternative that will minimize the placement of objects within this zone. ODOT will continue coordination efforts with the FAA and Medford Airport.

#### Preferred Alternative Subsequent to Construction of the JTA **Phase**

 ODOT will develop an IAMP for the Vilas Road Interchange before it is constructed, in collaboration with the City of Medford and Jackson County.

# 3.1.5.2 Project Construction

- ODOT will prepare a traffic management plan for project construction. The traffic management plan will provide for detours, flaggers, time-of-day lane closure restrictions, weekend closure restrictions, staging plans, detour identification, ADA compliance, and provision of local access.
- ODOT will prepare a public involvement plan to inform and engage those affected by project construction. This plan will include a project website to provide current information on construction activities.

### 3.1.5.3 Mitigation Measures Recommended for the City of Medford

ODOT recommends that the City of Medford install a traffic signal at the intersection of Crater Lake Avenue and Owens Drive. As described in Section 3.1.3.2, the intersection is forecast to have a v/c ratio of over 2.0. A traffic signal at the intersection will substantially lower the v/c ratio.

#### **Section 3.2 Content** 3.2.1 **Regulatory Setting** 3.2.1.1 Federal Laws

3.2.1.2 State, Regional, and Local Laws, Plans, and Policies

3.2.2 **Affected Environment** 

3.2.2.1 Existing Land Use and Zoning

3.2.2.2 Planned Land Use

**Environmental Consequences** 3.2.3

3.2.3.1 Direct Land Use Impacts

3.2.3.2 Indirect Impacts, Including Impacts on Farmlands

3.2.3.3 Construction Impacts

3.2.3.4 Compliance with Federal Laws and State, Regional, and Local Laws, Plans, and Policies

3.2.4 Avoidance, Minimization, and/or Mitigation Measures

3.2.5 Avoidance, Minimization, and/or Mitigation Commitments

Incorporated Into the Preferred Alternative

# 3.2 Land Use

This section describes existing land uses and land use plans and how the alternatives would impact land use. This section also addresses compliance of project alternatives with applicable federal and state laws, regulations, and policies and their consistency with the RTP and local comprehensive plans.

# 3.2.1 Regulatory Setting

### 3.2.1.1 Federal Laws

NEPA requires that all actions sponsored, funded, permitted, or approved by federal agencies be reviewed to ensure that environmental considerations, including land use impacts, are given due weight in project decision-making. Federal implementing regulations are at 40 CFR 1500-1508 and 23 CFR 771 and 774. These regulations and FHWA Technical Advisory T6640.8A require that an EIS include discussion of possible conflicts between the proposed action and applicable federal, tribal, regional, state, and local land use laws, plans, and policies, and the extent to which the agency would reconcile its proposed action with the laws, plans, or policies. There is no tribal jurisdiction over land use in the project area, so tribal laws, plans, or policies are not addressed here.

In addition, the Farmland Protection Policy Act (FPPA, 7 USC 4201-4209, and its regulations, 7 CFR Part 658) requires federal agencies to coordinate with the Natural Resources Conservation Service, if their activities may irreversibly convert farmland directly or indirectly to nonfarm use.

## 3.2.1.2 State, Regional, and Local Laws, Plans, and Policies

The State of Oregon established the Statewide Planning Program in 1973. Fundamental to the program are the 19 Statewide Planning Goals. The Goals express the state's policies on land use planning and related topics, including citizen involvement, farmland protection, natural resources, transportation, and urban growth. The Statewide Planning Program strongly emphasizes coordination, including keeping state agency programs and local land use and transportation plans consistent with each other. Two key components of the program for transportation projects are state agency administrative rules. The first is Oregon Administrative Rule (OAR) Chapter 731, Division 15, which is the ODOT State Agency Coordination Program (SAC). The SAC is intended to ensure coordination between ODOT projects and local comprehensive plans. The SAC requires that ODOT projects be compatible with local comprehensive plans.

### LAND USE

3.2

The SAC also requires that, if a local plan must be amended to make a project compatible with the plan, the amendments must comply with the Statewide Planning Goals. The second administrative rule is OAR Chapter 660, Division 12, the Transportation Planning Rule (TPR), which contains the rules that implement Statewide Planning Goal 12, Transportation. These include rules for amending a comprehensive plan to allow state highways in rural areas. The rules include special protections for farmlands zoned Exclusive Farm Use (EFU). Jackson County would have to amend its comprehensive plan before either of the build alternatives or the JTA phase could be built.

Other features of Oregon's Statewide Planning Program relevant to this section are its requirements that land development comply with zoning, that zoning conform to the applicable comprehensive plan, and that amendments to comprehensive plans meet state standards. These standards include the requirements that urban land uses be allowed only inside urban growth boundaries (UGBs) and that UGBs may be expanded only if the supply of land inside them is demonstrated to fall short of needs tied to state-approved forecasts of population and employment growth. The result is that comprehensive plans determine whether and how land may be developed.

For further information on land use impacts and compliance with applicable laws and plans, including citations to source documents, refer to the Land Use and Planning Technical Report, June 2012. This report is available from the ODOT contact person identified on page i of this EIS.

### 3.2.2 Affected Environment

This subsection describes existing land use, land use plans, and the zoning that implements the land use plans. This includes a description of the lands zoned EFU, to which the Oregon Statewide Planning Program gives extra protection. Section 3.2.3.4, describes applicable provisions of federal, state, regional, and local laws, plans, and policies and analyzes the build alternatives and JTA phase compliance with them.

The land use impact analysis uses two areas, the Primary API and the Secondary API, and divides the Primary API into three subareas. Figure 3.2-1 shows the boundaries of the Primary and Secondary APIs. The Primary API contains lands on which the project would have direct impacts, as defined in the introduction to Chapter 3, and which the project would indirectly impact by changing both travel times and access to individual properties and by fragmenting farmland. The Secondary API contains land that the project would indirectly impact only by changing commute travel times.

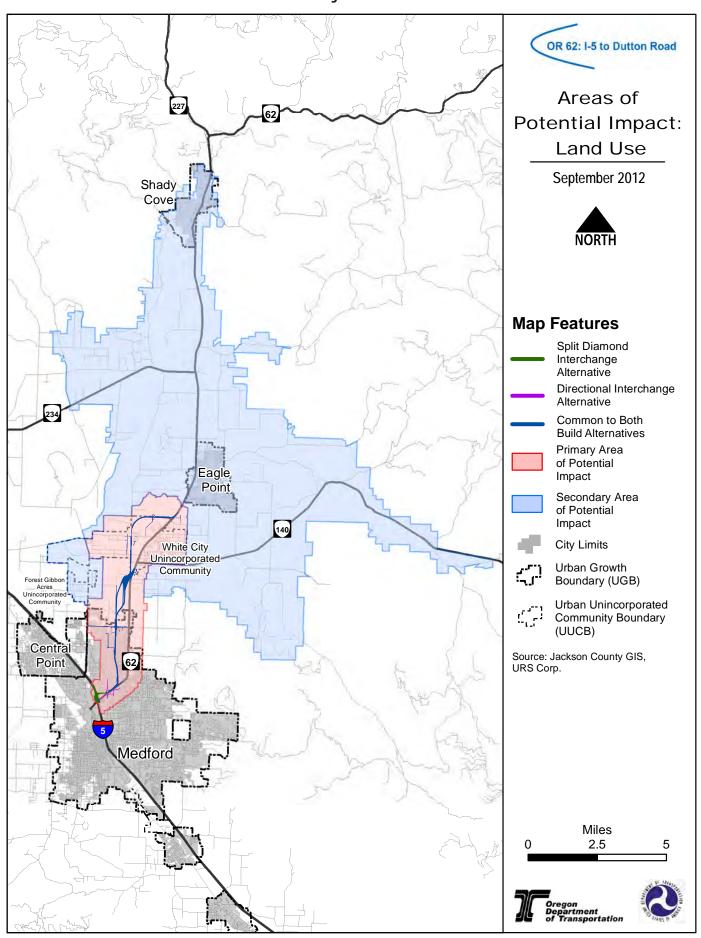
The Primary API subareas are intended to enable description of localized land use impacts of the alternatives and design options, as well as their total land use impacts. Figure 3.2-2 shows their boundaries. The three Primary API subareas correspond to three categories of land within the Oregon Statewide Planning Program. Primary API Subarea 1 consists of lands within the Medford UGB and adjacent lands to the east. Primary API Subarea 2 consists of rural lands between the Medford UGB and the White City urban unincorporated community boundary (UUCB). Primary API Subarea 3 consists of lands within the White City UUCB and adjacent lands to the north.

# 3.2.2.1 Existing Land Use and Zoning

Figure 3.2-2 shows existing land use in the Primary API and Table 3.2-1 shows the amount of Primary API land in each use category. The land in the Primary API is largely, but not entirely, urbanized (i.e., developed as a city). Figure 3.2-3 shows existing land use in the Secondary API and Table 3.2-2 shows the amount of land in each use category in the Secondary API. Uses in the Secondary API are mainly farm and rural residential, with urban uses in the Cities of Eagle Point and Shady Cove.

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Figure 3.2-1



**Figure 3.2-2** 

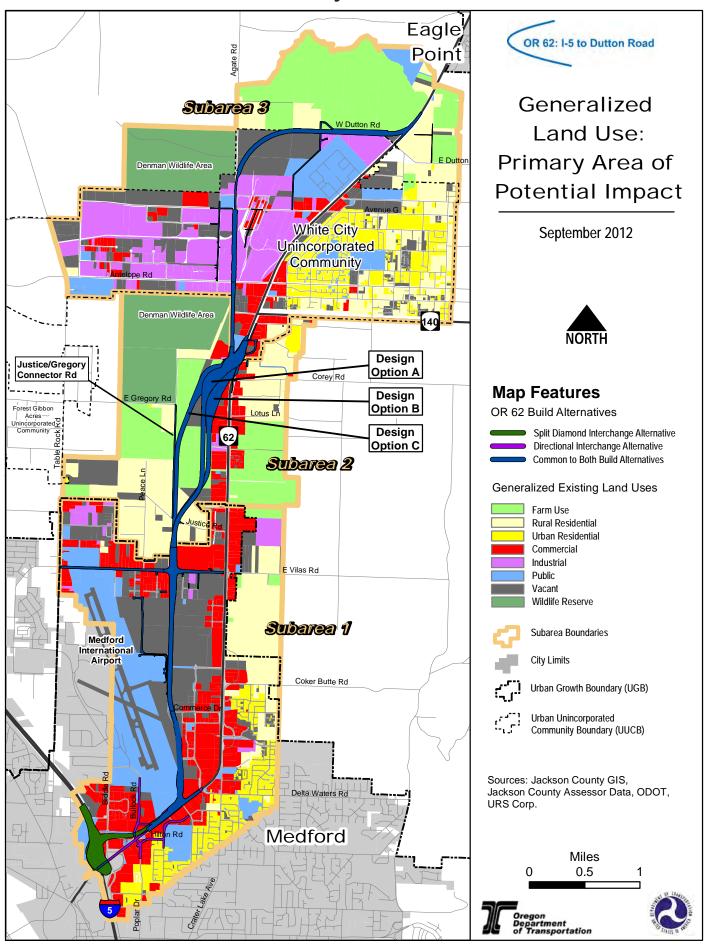
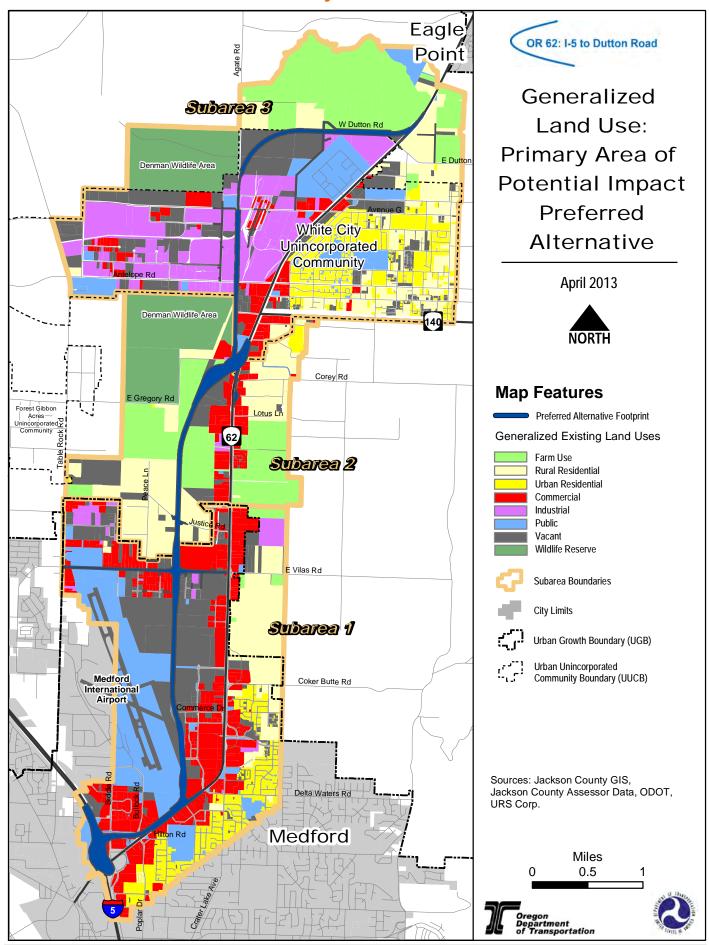
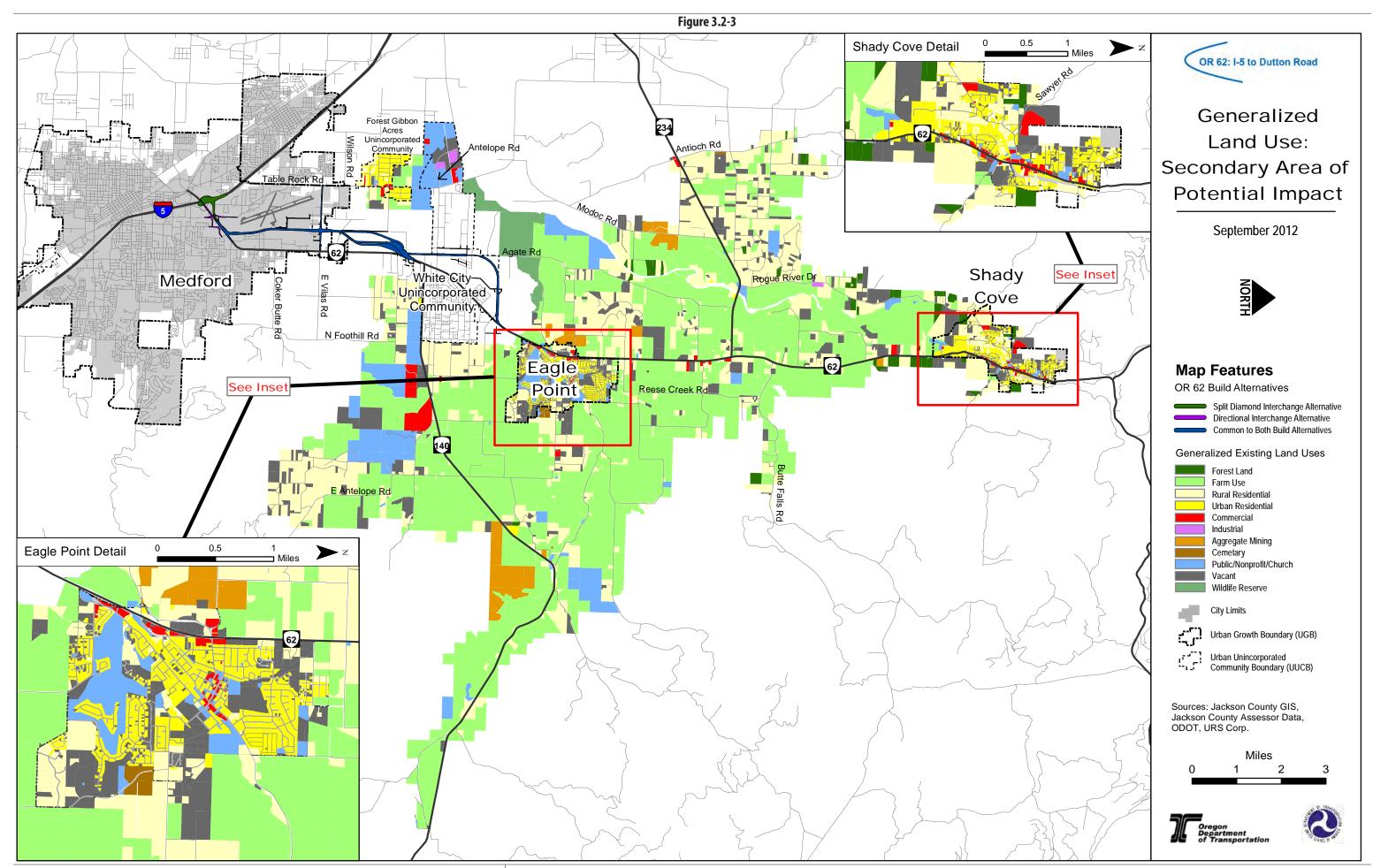


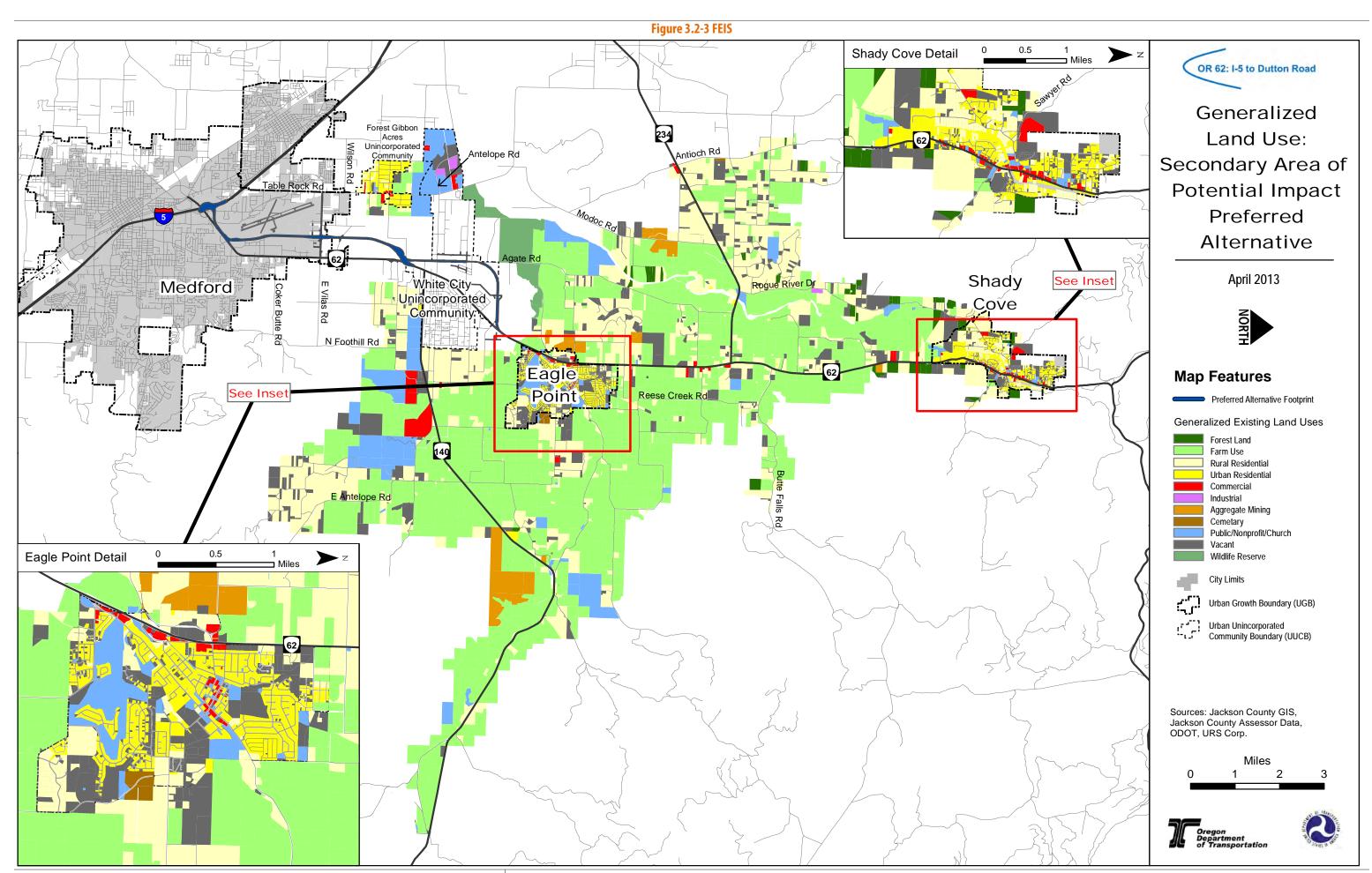
Figure 3.2-2 FEIS



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Table 3.2-1 Existing Land Use, Primary API

Land Use Category	Acres	Percent of Total
Commercial	1,224	14
Farm	1,324	15
Industrial	844	9
Rural Residential	1,610	18
Urban Residential	659	7
Wildlife Area	666	7
Vacant	1,471	16
Public Lands and Other	1,241	14
Total	9,040	100

Note: Numbers do not add up because of rounding.

Sources: Jackson County Geographic Information Services, Jackson County Assessor's Office, URS Corp.

Table 3.2-2 Existing Land Use, Secondary API

Land Use Category	Acres	Percent of Total
Aggregate Mining	1,077	2
Commercial	580	1
Farm	28,937	53
Forest Land	608	1
Industrial	81	0
Rural Residential	12,580	23
Urban Residential	1,440	3
Wildlife Refuge	917	2
Vacant	4,417	8
Public Lands and Other	4,052	7
Total	54,690	100

Note: Number of acres do not add up because of rounding.

Sources: Jackson County Geographic Information Services, Jackson County Assessor's Office, URS Corp.

Figures 3.2-4 and 3.2-5 show the zoning in the Primary and Secondary APIs. Table 3.2-3 shows the amount of land in each City of Medford zoning district and describes each district. Table 3.2-4 does the same for Jackson County zoning districts. The City of Medford has two airport-related overlay zones that impose height limits within them; Figure 3.2-4 shows the boundaries of the two overlay zones. An overlay zone is a zone that adds regulations to the regulations applicable to the underlying land use zones.

**Figure 3.2-4** 

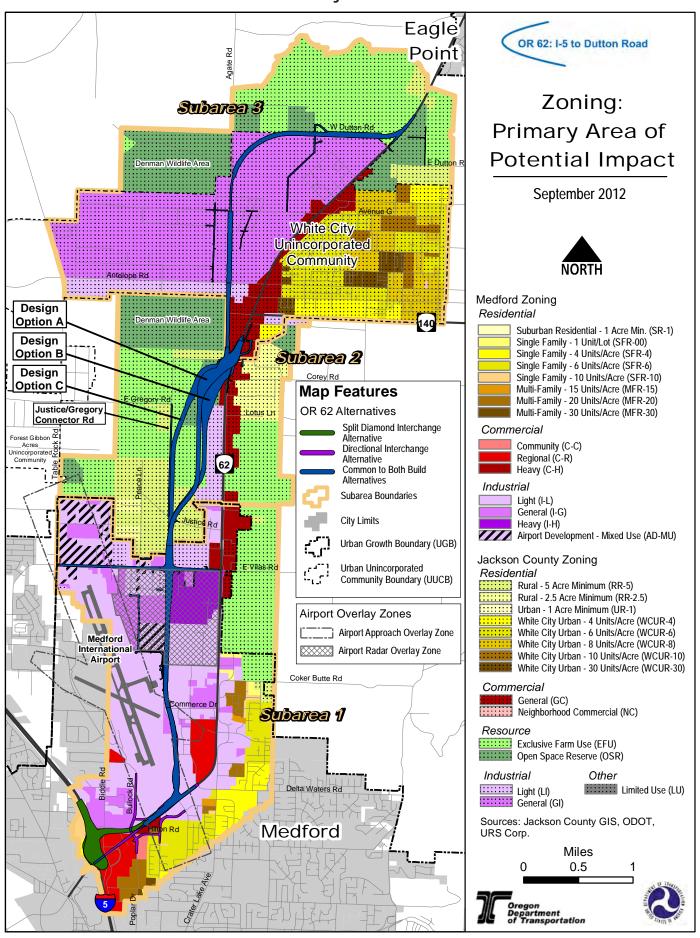
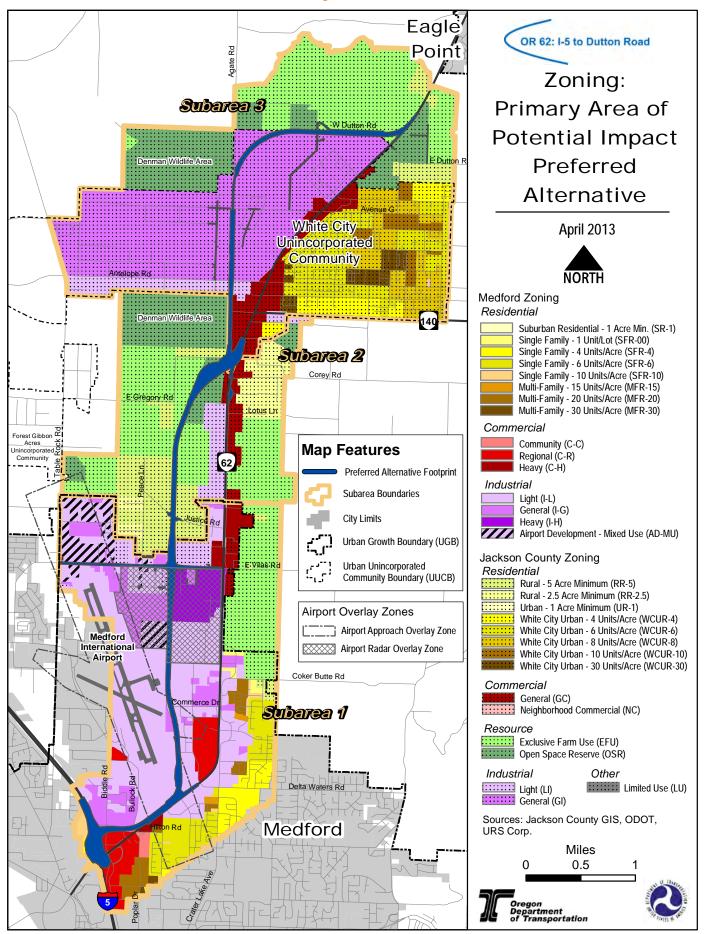
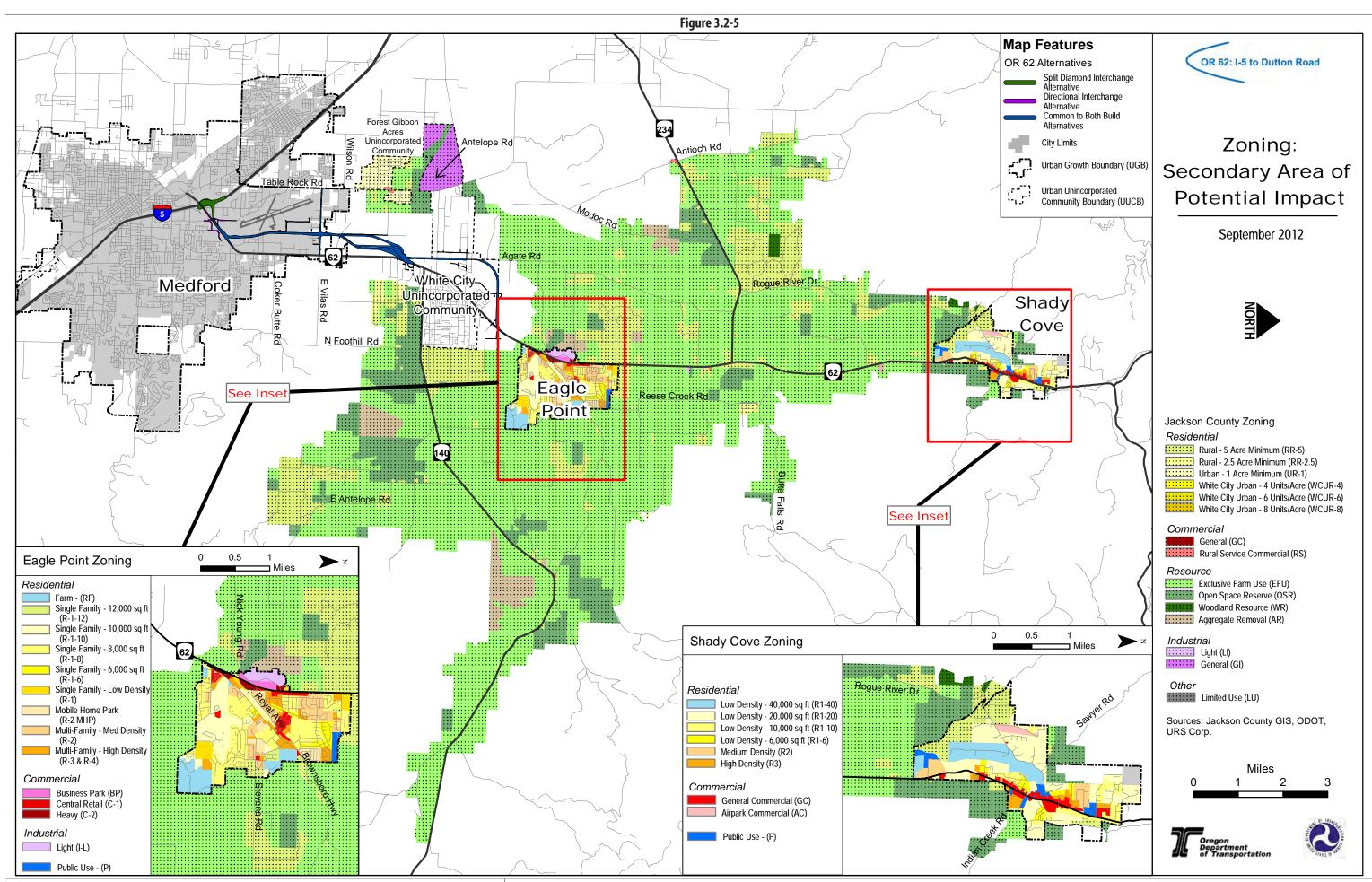


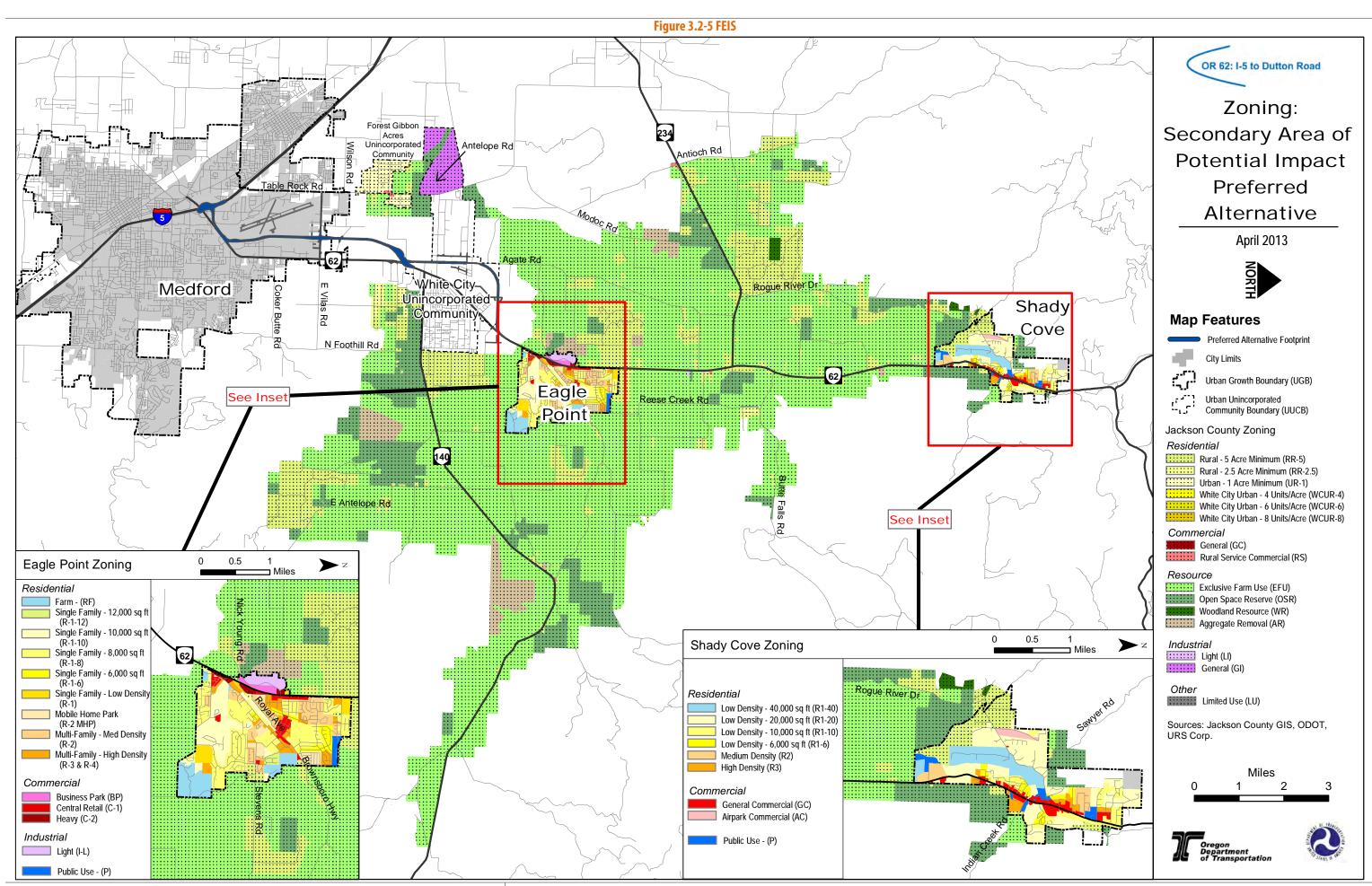
Figure 3.2-4 FEIS



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Table 3.2-3 Medford Zoning Districts, Acreage, and Description, Primary API

Zone District (Map Code)	Acres	Description from Zoning Code
Airport Development – Mixed Use (ADMU)	204	The purpose of the district is to encourage desirable and appropriate land uses in proximity to major airports while preventing air space obstructions. This is a County zoning district the City administers. It provides for light industrial uses like the I-L district, below.
Commercial — Community (C-C)	17	For commercial uses serving the shopping needs of the community, typically in shopping centers. Uses generally may not exceed 50,000 square feet gross floor area.
Commercial — Heavy (C-H)	77	Provides for lands for commercial and service uses which typically produce a greater degree of noise, vibration, air pollution, and glare than residential or commercial zones.
Commercial — Regional (C-R)	216	Provides land for services and commercial uses servicing the shopping needs of the community and surrounding region. To be located in areas served by adequate regional and local streets systems to avoid impact of regional traffic using neighborhood streets.
Commercial — Service Professional (C-S/P)	0	The zone is intended to be customer-oriented, but with limited retail uses.
Industrial — General (I-G)	358	Provides for lands for industrial uses which involve some noise, vibration, air pollution, radiation, glare phenomena, and fire and explosive hazards.
Industrial — Heavy (I-H)	145	Provides for lands for industrial uses which involve the highest expected amounts of noise, vibration, air pollution, radiation, glare, and fire and explosive hazards.
Industrial — Light (I-L)	1,281	Provides for warehouse, office, and low intensity industrial uses.
Multifamily (MFR-15)	10	Provides for medium density townhouses, duplexes, apartments, mobile home parks, and group quarters. Minimum and maximum density factor of 10 to 15 dwelling units per gross acre.
Multifamily (MFR-20)	91	Provides for medium density townhouses, duplexes, apartments, mobile home parks, and group quarters. Minimum and maximum density factor of 15 to 20 dwelling units per gross acre.
Multifamily (MFR-30)	8	Provides for higher density townhouses, duplexes, apartments, mobile home parks, and group quarters. Minimum and maximum density factor of 20 to 30 dwelling units per gross acre.
Single Family Residential (SRF-00)	16	Holding zone from properties changing from County to City zoning and have not been tested for facility adequacy.
Single Family Residential (SRF-4)	141	Urban residential district with densities of 2.5 and 4.0 dwellings/gross acre.
Single Family Residential (SRF-6)	237	Urban residential district with densities of 4.0 and 6.0 dwellings/gross acre.
Single Family Residential (SRF-10)	35	Urban residential district with minimum and maximum densities of 6.0 and 10.0 dwellings/gross acre.
Suburban Residential (SR-2.5)	3	The district's purpose is to provide for large-lot residential areas, consistent with the predominate rural character of the area.
Total	2,838	

Note: Numbers do not add up because of rounding.

Sources: Medford LDO, Land Use and Planning Technical Report, June 2012.

As Figure 3.2-4 shows, the build alternatives and JTA phase design options would cross land zoned Exclusive Farm Use (EFU). While all of this land is in farm use, mostly irrigated hay and pasture, the soils are marginal in quality and the land is not considered prime or unique farmland. 1 As Figure 3.2-4 also shows, the build alternatives and JTA phase design options would cross land zoned Open Space Reserve (OSR). As Table 3.2-4 indicates, the purpose of OSR zoning is to "conserve forest lands and implement... Statewide Planning Goal 4 (Forest Lands)." As with agricultural land, the Oregon Statewide Planning Program gives extra protection to forest lands. However, most of the OSR-zoned land is vacant and none of the land has been in forest use in modern times.

<sup>1</sup>Prime farmland is defined as "land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. . "Unique farmland is defined as "land other than prime farmland that is used for the production of specific high value food and fiber crops." (CEQ 1980)

Table 3.2-4 Jackson County Zoning Districts, Acreage and Purpose, Primary and Secondary APIs

Acres			
Zone District (Map Code)	Primary API	Secondary API	Purpose Language from Code
Aggregate Resource (AG)	0	1,417	To allow development and use of significant mineral and aggregate resources.
Exclusive Farm Use (EFU)	1,993	36,902	To conserve agricultural land and implement the Oregon Agricultural Land Use Policy, ORS 215.243, Oregon Administrative Rules, and Statewide Planning Goal 3, Agricultural Lands.
Forest Resource (FR)	0	0	To conserve forest lands and implement Oregon Administrative Rules and Statewide Planning Goal 4 (Forest Lands).
General Commercial (GC)	377	5	To provide locations for larger retail service commercial centers along major highways and within existing urban areas.
General Industrial (GI)	1,537	646	To provide for heavy industrial uses.
Light Industrial (LI)	392	10	To provide for light manufacturing and fabrication. The district also allows for limited retail commercial and office uses when such uses are subordinate to industrial uses.
Neighborhood Commercial (NC)	0	1	To conveniently provide basic commodities for residential neighborhoods and to provide a mix of commercial and residential uses.
Open Space Reserve (OSR)	1	0	Same as Forest Resource district, above.
Rural Light Industrial (RLI)	1,027	6,049	To provide industrial uses that rely on site-specific natural resources for their processes and activities or create a byproduct of substantial direct benefit to resource-producing lands.
Rural Residential (RR-2.5)	209	231	To provide for large-lot residential areas, consistent with the
Rural Residential (RR-5)	500	7,244	predominate rural character of the area.
Rural Service Commercial (RS)	0	33	To provide basic commodities to rural areas for which a specialized RS district has not been adopted.
Sams Valley Rural Service Commercial	5	447	To provide basic commodities to the Sams Valley unincorporated community.
White City Urban Residential — 4 (WCUR-4)	158	0	To provide urban residential areas with densities up to 10 dwellings
White City Urban Residential - 6 (WCUR-6)	402	1	per acre for single family dwellings and up to 30 dwellings per acre for multiple-family dwellings.
White City Urban Residential - 8 (WCUR-8)	297	0	To manage family artenings.
White City Urban Residential - 10 (WCUR-10)	98	0	
White City Urban Residential - 30 (WCUR-30)	87	0	
Woodland Resource (WR)	0	131	Same as Forest Resource, above.
Total	7,082	53,117	

Note: Numbers do not add up because of rounding.

Sources: Jackson County 2004 and Land Use and Planning Technical Report, June 2012.

#### 3.2.2.2 Planned Land Use

Figure 3.2-6 shows comprehensive plan designations in the Primary API and Figure 3.2-7 shows comprehensive plan designations in the Secondary API. To avoid repetition, tables comparable to Tables 3.2-3 and 3.2-4, but showing comprehensive plan designations, are not included here, but are in the Land Use and Planning Technical Report. Because zoning must be consistent with comprehensive plan designations, the purposes of the comprehensive plan designations are similar to the purposes of the related zones in Tables 3.2-3 and 3.2-4, but more generalized.

The jurisdictions of the Bear Creek Valley, where the proposed project is located, are considering adoption of a plan, the Greater Bear Creek Valley Regional Plan, which was developed to accommodate a doubling of the region's population over a roughly 50-year time frame. The plan is relevant to the indirect land use impacts of project alternatives in section 3.2.3.2 and cumulative land use impacts in Section 4.1.3.2. The plan identifies "urban reserves," into which UGBs would be expanded. The draft Greater Bear Creek Valley Regional Plan also includes an allocation of population growth among the Bear Creek Valley's cities and unincorporated Jackson County and identifies minimum densities to be achieved in the urban reserves. The latter reflects a strategy to seek "nodal development," which means higher density, mixed-use development intended to reduce travel demand and facilitate travel by alternatives to single-occupant automobiles. Figure 3.2-8 shows the locations of the proposed urban reserves in the project area. Urban reserves for Medford have an MD prefix; for Central Point, a CP prefix; and for Eagle Point, an EP prefix.

# 3.2.3 Environmental Consequences

# 3.2.3.1 Direct Land Use Impacts

Direct land use impacts are defined as conversions of land to transportation use.

#### No Build Alternative

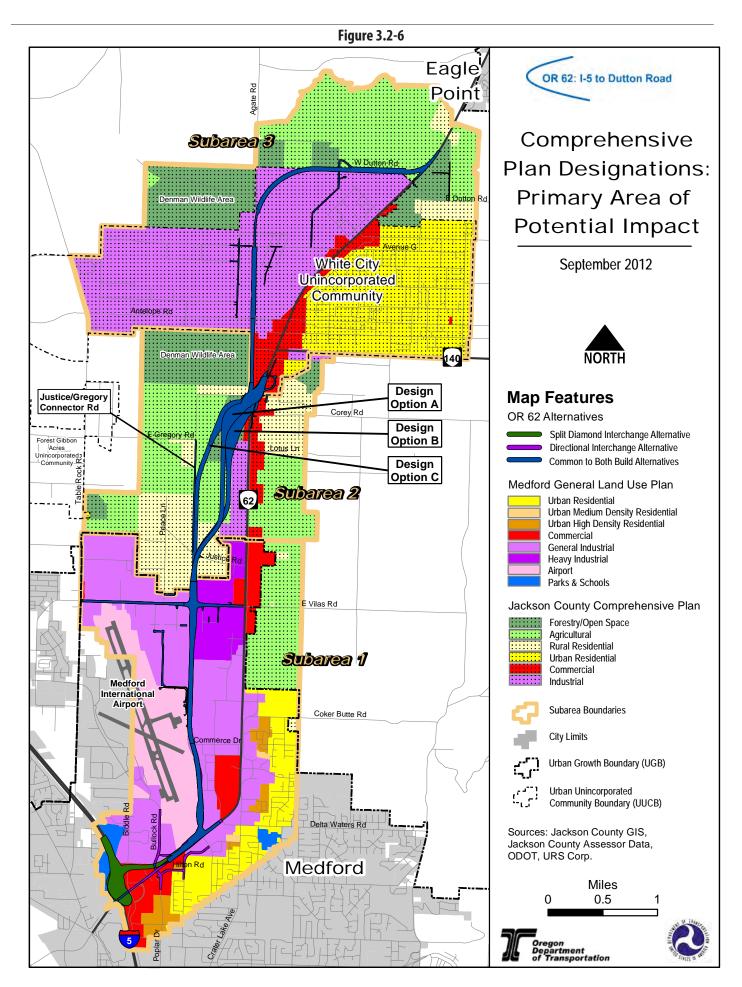
The No Build Alternative would have no direct land use impacts.

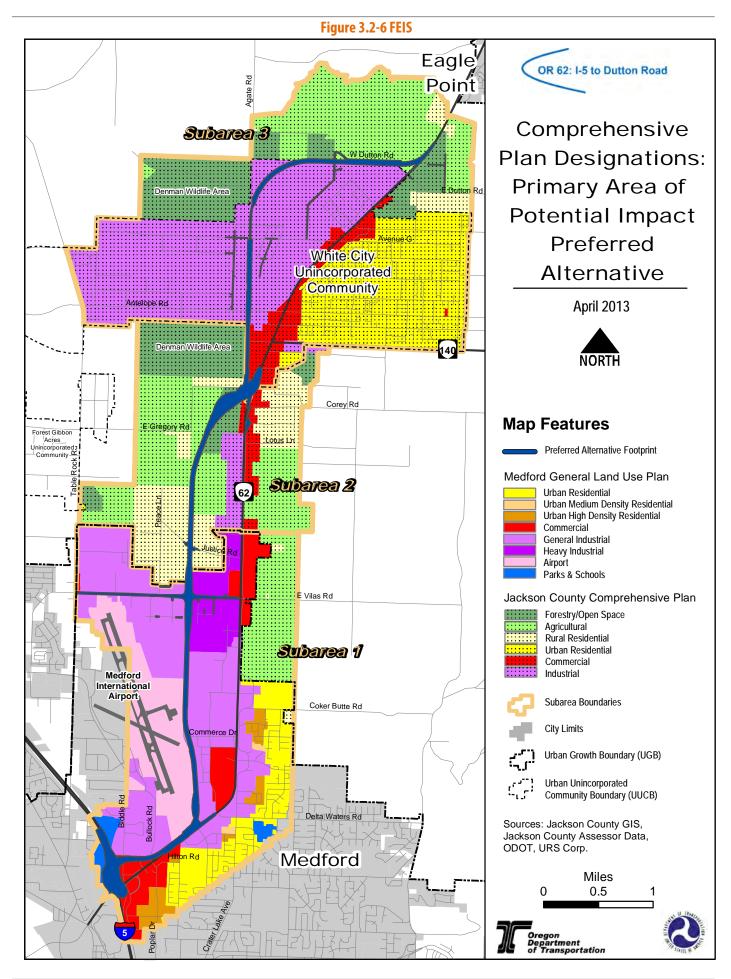
#### **Build Alternatives**

The build alternatives would convert to transportation use between 233 to 262 acres of land not already in public right-of-way, depending on alternative and design option. The SD Alternative would convert 244 acres under Design Option A, 262 acres under Design Option B, and 247 acres under Design Option C. The DI Alternative would convert 233 acres under Design Option A, 250 acres under Design Option B, and 236 acres under Design Option C. Design Option B of the SD Alternative, which would convert the most land, would convert 13 percent more land than Option A of the DI Alternative, which would convert the least land. The principal differences among the build alternatives and design options are:

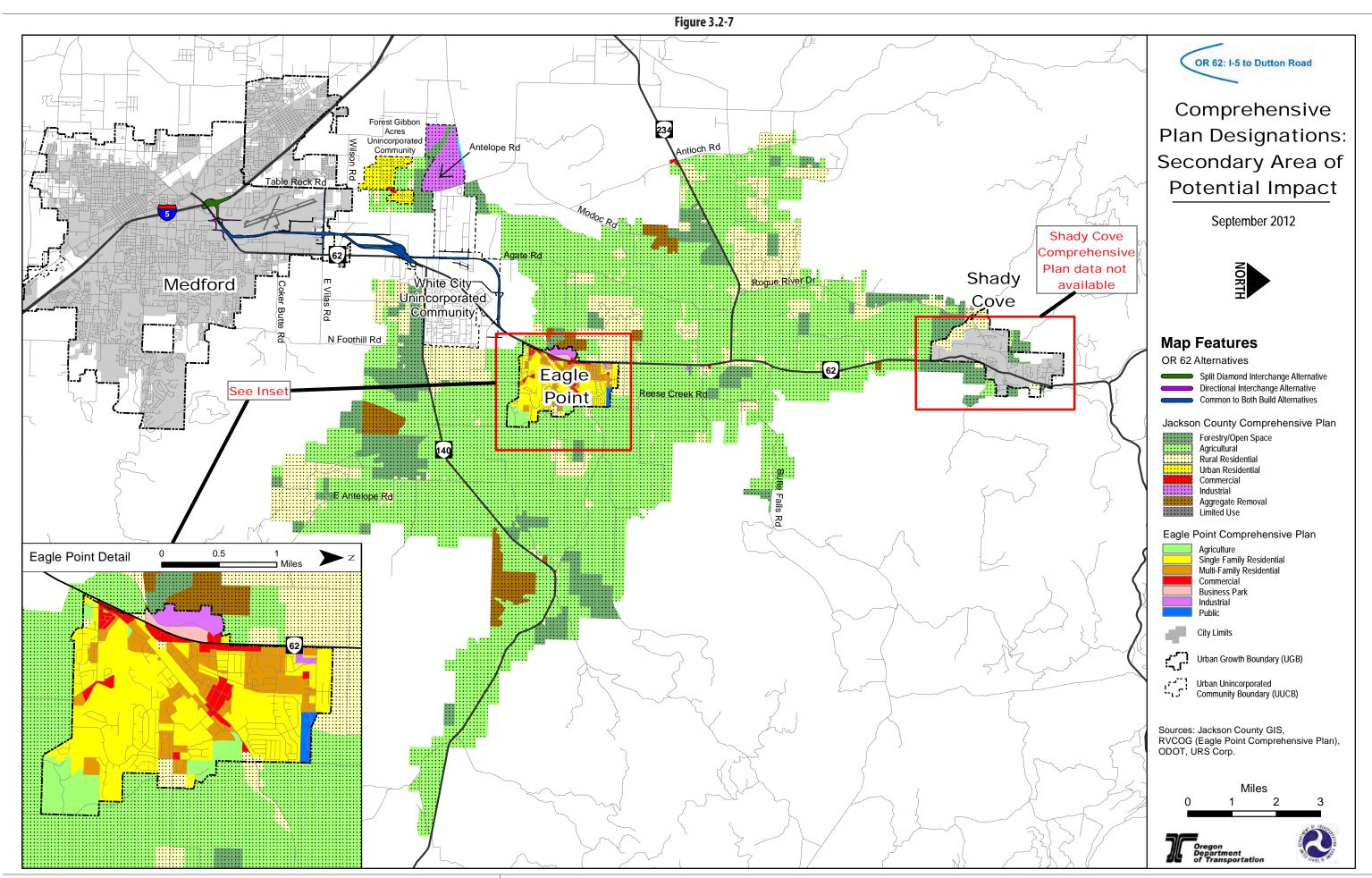
### **Primary API Subarea 1**

- The SD Alternative would use 23 percent more land used, designated, and zoned for commercial use than the DI Alternative (about 31 acres vs. about 25 acres).
- The SD Alternative would use more public land than the DI Alternative. Approximately 3.75 acres of the public land used for the SD Alternative would be from the Bear Creek Greenway on the west side of I-5. As section 3.6.3.1 states, the Bear Creek Greenway path crosses approximately 0.1 acres of the 3.75 acres. ODOT would realign the path at this location to preserve the path's recreational function. The DI Alternative would not impact the Greenway.

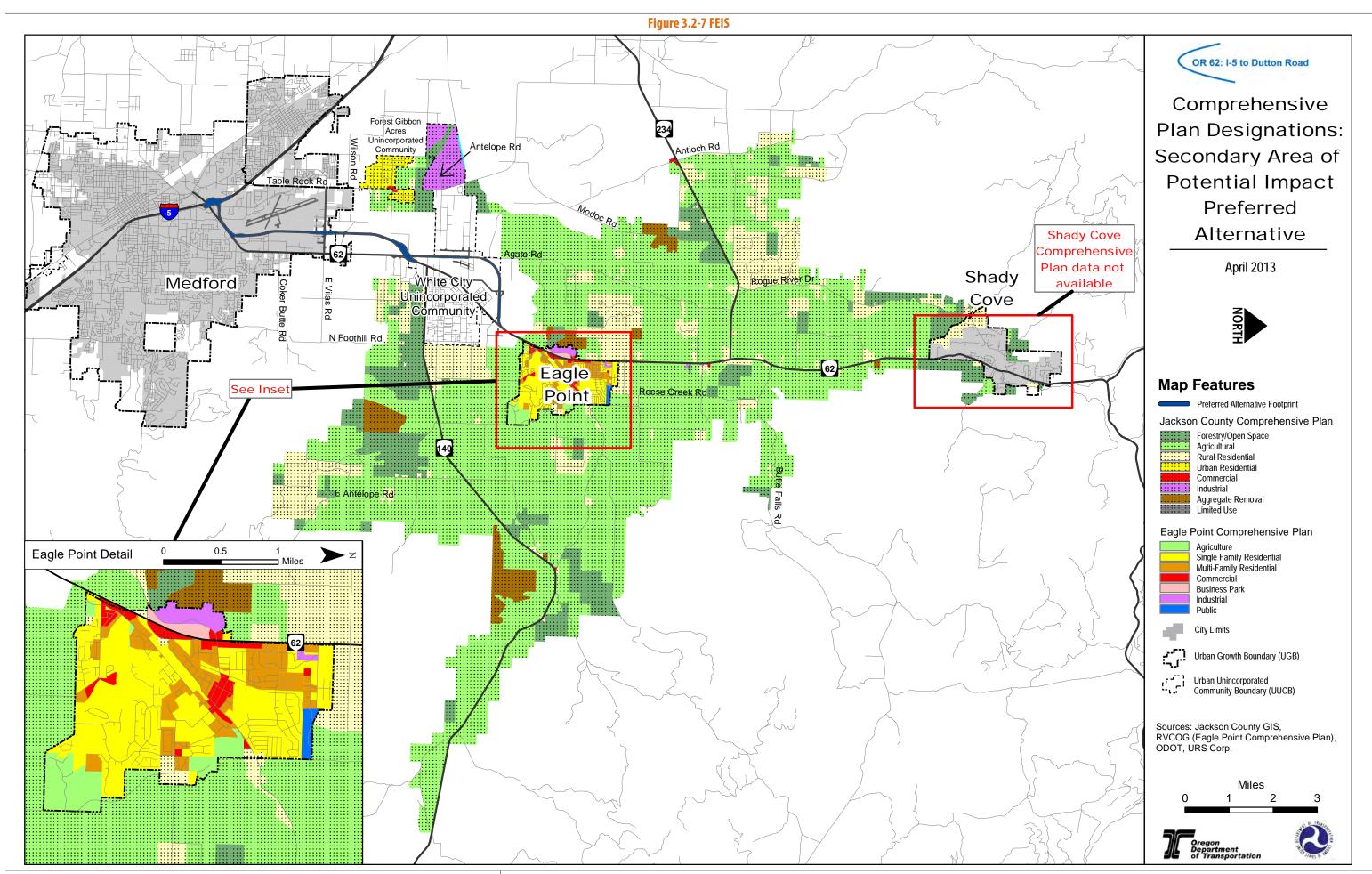




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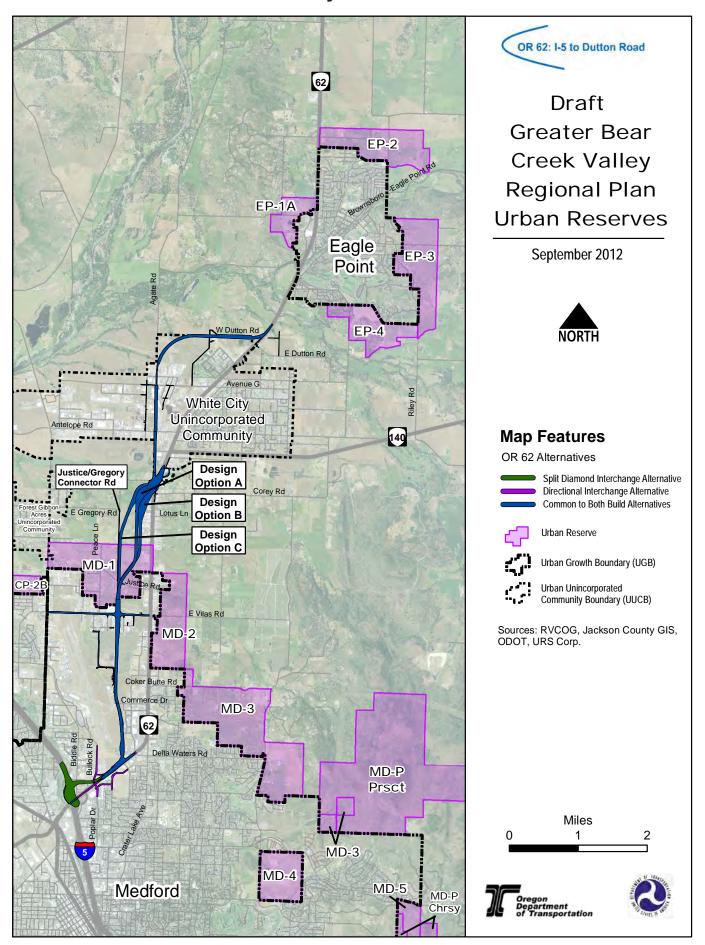


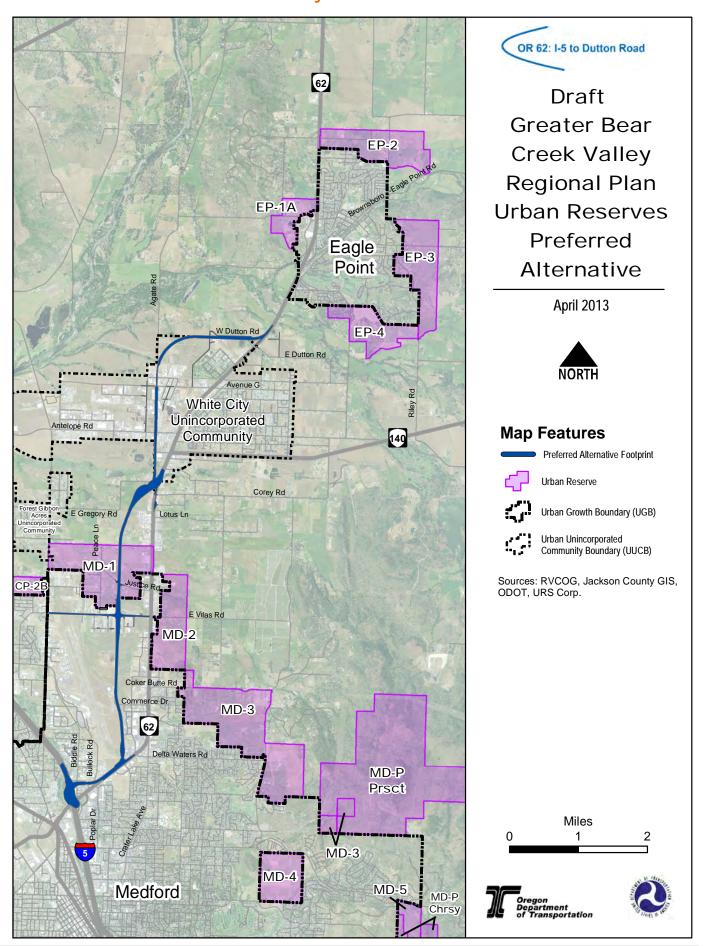
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**Figure 3.2-8** 





#### **Primary API Subarea 2**

- Design Option B of both build alternatives would use about 20 percent more land than Design Options A and C and about 15 more acres of land in commercial use, of which about 10 acres is planned and zoned for industrial use.
- Design Option C of both build alternatives would use about 3 more acres of land in farm use than Design Option A and 4 more acres than Design Option B. Design Option C would use about 1.5 acres more land designated for farm use and zoned EFU than Design Option A and about 2.5 acres more land than Design Option B. However, for the reasons stated in Section 3.2.3.2, the total effective reduction in farmland may be smaller under Design Option C than under Design Options A or B.
- Design Options B and C of both build alternatives would use about 4 more acres of land zoned for forestry or open space (the FR and OSR zones) than Design Option A. Most of this land is currently unused. For the reasons stated in Section 3.2.3.2, this land is unlikely to be used for forestry in the future.

#### **Primary API Subarea 3**

- The largest direct impact by category of plan designation and zoning is industrial. Both build alternatives would use about 39 acres of land designated and zoned for industrial use, of which about 16 acres are currently in industrial use.
- The build alternatives would use about 15 acres of land zoned EFU, and about 5 acres zoned OSR.

The direct impacts of the build alternatives are not expected to cause shortages of land available for commercial, industrial, or residential development. The conversion of farmland to roadway use would contribute to the loss of farmland in the region, which is addressed in Chapter 4, Cumulative Impacts.

The removal of the Justice/Gregory connector road from the Preferred Alternative will reduce the amount of land converted to transportation use from rural residential use by 0.7 acres and reduce the amount of land converted from farm use by 2.7 acres. Similarly, removal of the Justice/Gregory connector road will reduce the amount of land converted to transportation use zoned Rural – 5 Acre Minimum (RR-5) by 0.6 acres and the amount of land zoned EFU by 2.8 acres.

As described in Sections 3.12.4.1, 3.13.4.4, and 3.13.4.5, ODOT will mitigate for the impacts of the Preferred Alternative on wetlands and associated endangered species at the Kincaid Property Mitigation Site shown in Figure 3.12-9. This will remove the site from agricultural production. The land is zoned EFU, under which wetland restoration and enhancement are allowed uses. ODOT has obtained a Type I land use permit for the site from Jackson County

#### JTA Phase

The direct impacts of the JTA phase would be considerably smaller than the direct impacts of the full build alternatives: 124 acres under Design Options A and B and 123 acres under Design Option C. The direct impacts of the JTA phase would be smaller because the JTA phase would not include:

- an interchange with I-5, so there would be no use of Bear Creek Greenway land;
- an overcrossing of Poplar Drive/Bullock Road, local street modifications, or extensions, as with the DI Alternative;
- an interchange at Vilas Road;
- · widening of Vilas Road;
- changes to local roads in the vicinity of Vilas Road, including Helicopter Way, Helo Drive, Industry Drive, and Enterprise Drive; or
- the segment of the bypass north from Gregory Road to OR 62 at Dutton Road under the build alternatives.

The principal differences between the JTA phase design options are:

- Design Option C would use more land in farm use and zoned EFU than Design Options A or B.
   This land is in Subarea 2 of the Primary API. However, for the reasons stated in Section 3.2.3.2,
   (regarding the build alternatives), the total reduction in farmland, including conversions caused indirectly, may be smaller under Design Option C than under Design Options A or B.
- Design Option B would use less land zoned OSR than the other design options. For the reasons stated in Section 3.2.3.2, (regarding the build alternatives), this land is unlikely to be used for forestry in the future.
- Design Option C would use less land zoned for rural residential uses than the other design options.

None of these differences are large and the difference in total direct land use impacts among the design options is small.

As described in Section 2.1.4 and shown in Figure 2-11, a segment of the JTA phase bypass near its northern terminus would be removed upon completion of a full build alternative. The affected area is about 9 acres in size. At the time of construction of a build alternative, it is expected that ODOT would remove this segment of the bypass and vacate the right-of-way it occupies.

As Figures 3.2-2, 3.2-4, and 3.2-6 show, these 9 acres of land are vacant, zoned OSR, and designated Forestry/Open Space. This land would likely remain vacant regardless of this project for the reasons stated in Section 3.2.3.2. In addition, as described in Section 2.1.4 and shown in Figure 2-11, at the southern terminus under the SD Alternative, the ramp from existing OR 62 southbound would be removed. Because the amount of land the ramps occupy would be approximately 2 acres in size and located between existing OR 62 and the bypass, ODOT probably would not vacate the right-of-way, so the land would remain in transportation use.

The removal of the Justice/Gregory connector road from the JTA phase will reduce the amount of land converted to transportation use from rural residential use by 0.7 acres and reduce the amount of land converted from farm use by 2.7 acres. Similarly, the removal of the Justice/Gregory connector road will reduce the amount of land converted to transportation use zoned Rural – 5 Acre Minimum (RR-5) by 0.6 acres and the amount of land zoned EFU by 2.8 acres

# **3.2.3.2 Indirect Impacts, Including Impacts on Farmlands**

Indirect land use impacts are changes in land use resulting from how transportation improvements alter access to individual properties and travel times, especially commute travel times, and fragment existing farmland. The analysis in this section addresses impacts based on adopted plans. Because the draft Bear Creek Valley Regional Plan has not yet been adopted it is not included in the analysis. Section 4.1.3.2, Cumulative Impacts, addresses past and present land use and potential future land use, as influenced by the project alternatives, the draft Bear Creek Valley Regional Plan, and the transportation projects that will be built under the No Build Alternative.

In Oregon, comprehensive plans, not transportation improvements, are the primary determinants of land use because comprehensive plans determine whether and how land may be developed. However, transportation improvements can influence when land is developed. In addition, transportation improvements can affect whether land is developed and how comprehensive plans are amended. This subsection describes how the No Build Alternative, build alternatives, and JTA phase would affect when land is developed and the potential effects of the No Build Alternative, build alternatives, and JTA phase on comprehensive plan amendments.

#### **No Build Alternative**

Build-out of the land within the existing UGBs of Medford and Eagle Point and the White City UUCB in the Primary and Secondary APIs would likely occur over time under the No Build Alternative, but plan amendments and zone changes to allow larger-scale development would be constrained. Over time, increases in congestion and travel time on OR 62 would make the Primary and Secondary APIs less desirable for residential, commercial, and industrial development. See the travel times from downtown Medford in Table 3.2-5. Figure 3.2-9 shows the location of the intersections in the "To" column of Table 3.2-5. The increases in travel time would be gradual and total commute travel times using OR 62 within the Primary API would remain at levels tolerated by many commuters. The PM peak-hour travel time from downtown Medford to OR 62 and Vilas Road is projected to be 18 minutes in 2015 and 23 minutes in 2035. The travel time to the intersection of OR 62 and OR 140 in White City from downtown Medford is projected to be 23 minutes in 2015 and 30 minutes in 2035. Commute travel times from downtown Medford to Eagle Point and farther away would reach levels that fewer commuters tolerate, e.g., 29 minutes to Eagle Point in 2015 and 36 minutes in 2035 and 42 minutes to Shady Cove in 2015 and 51 minutes in 2035.

Section 0060 of the TPR could slow quasi-judicial plan amendments and zone changes<sup>2</sup> to accommodate larger scale development in Medford and Eagle Point. Section 660-12-0060(2) places limitations on plan amendments which add more than 400 additional daily trips and would reduce highway mobility below adopted targets. The provision applies to amendments and zone changes that would cause violations of mobility targets or worsen violations that already exist. In these circumstances, applicants may be subject to conditions of approval that require highway transportation system improvement projects or limit the trip generation of the allowed development.

Under the No Build Alternative, even without any amendments or zone changes, forecasted traffic volumes would fail to meet the applicable mobility performance targets at four signalized intersections along OR 62 in 2015 and at an additional six signalized intersections by 2035, as shown in Table 3.2 6. The wide array of factors that bear on the application of Section 660-12-0060(2) prevent characterizing the extent and nature of the limitations that regulation would impose. The limitations would depend on the type and location of intervening development, the location of a plan amendment and zone change, how much traffic would be generated, and the extent to which capacity expansions other than the build alternatives would accommodate the added traffic.

Additional rural residential development would occur in the Secondary API outside the UGBs of Medford, Eagle Point, and Shady Cove and the White City UUCB, but would be limited. The capacity for additional residential development under current zoning is limited. In addition, the Oregon Statewide Planning Program does not permit rezoning areas like these to include large amounts of additional residential, commercial, or industrial development in rural areas.

Table 3.2-5 Existing and Projected PM Peak-Hour Travel Time From Downtown Medford (minutes)

			2015		2035				
То	2007	No Build Alternative	SD Alternative	DI Alternative	JTA Phase	No Build Alternative	SD Alternative	DI Alternative	JTA Phase
Bypass and Vilas Rd. via Bypass	NA	NA	12	12	NA	NA	13	12	NA
Existing OR 62 and Vilas Rd.  (Via Existing OR 62 Under JTA Phase)	15	18	13	13	16	23	14	14	17
Existing OR 62 and Agate Rd. (JTA Phase N. Terminus)	18	21	NA	NA	17	26	NA	NA	21
Existing OR 62 and OR 140	19	23	16	17	18	30	19	18	26
OR 62 and Nick Young Rd., Eagle Point	25	29	20	22	24	36	22	22	32
OR 62 and Sams Valley Hwy.	30	34	25	27	29	42	28	28	37
OR 62 and Rogue River Dr., Shady Cove	38	42	33	35	37	51	37	37	46
OR 140 and Brownsboro Hwy.	28	31	25	26	27	39	27	26	34

Notes:

NA means not applicable.

Travel times are from East 8th Street and OR 99 in downtown Medford, which was used as the travel time starting point because readers familiar with Medford know its location. Figure 3.2-9 shows the location of East 8th Street and OR 99 and the intersections in the "To" column. All build alternative and JTA phase travel times are via the bypass, except for non-bypass links, i.e., under the build alternatives, from the bypass to existing OR 62 via Vilas Rd.; under the JTA phase, from I-5 to Vilas Rd.; and, under all alternatives, from the north terminus to Eagle Point, Sams Valley Hwy., Shady Cove, and Brownsboro Hwy. All existing and No Build Alternative travel times are via existing OR 62.

Source: Land Use and Planning Technical Report, June 2012.

<sup>&</sup>lt;sup>2</sup>Quasi-judicial plan amendments and zone changes are usually applied for by a private party and the consideration of them by a city or county must comply with special requirements to provide notice to other affected parties and fair hearings.

#### **Build Alternatives**

# Primary API, Subarea 1, Inside the Medford UGB and Adjacent Lands to the East

## Impacts Common to Both Build Alternatives

From Delta Waters Road to near Coker Butte Road, both build alternatives would be unlikely to lead to changes in the primarily large retail commercial land uses on the west side of OR 62, labeled "Large Retail Stores" on the Figure 2-4 index map in Chapter 2. The build alternatives would reduce traffic volumes and congestion compared to the No Build Alternative, and regional access to the land uses along this stretch of roadway would remain very good. The large retail commercial uses along this stretch are destination retail, meaning that most of their customers deliberately make trips to them, versus stopping in as they pass by. Reduced traffic congestion on OR 62, compared to the No Build Alternative, would make the mixed commercial and light industrial uses on the east side more attractive for commercial use. However, the industrial zoning would deter conversions from industrial to commercial uses.

The reduced congestion along OR 62 and reduced travel times via the bypass to the intersection of OR 62 and Vilas Road, as shown in Table 3.2-5 would encourage infill commercial development on both sides of existing OR 62 north of Coker Butte Road within the Medford UGB. Th reduced congestion along OR 62 and reduced travel times could also increase pressure to expand the Medford UGB to the east in this area because commute travel times would be lower. Proposed Urban Reserve MD-2, one of the urban reserves described in Section 3.2.2.3 and shown on Figure 3.2-8, is located in Primary API Subarea 1 east of the Medford UGB.

Like their effect on development of land along existing OR 62, the build alternatives would accelerate the development of undeveloped land in the area near the Vilas Road Interchange. The build alternatives could also accelerate the redevelopment of low intensity uses, such as the Medford Gun Club and Medford Rifle and Pistol Club, shown on Figures 2-4, Sheet 6. The reason would be a substantial reduction in peak-hour travel times from downtown Medford, as compared to the No Build Alternative: peak-hour travel times from downtown Medford would be reduced by about one-half in 2035, compared to the No Build Alternative. Based on existing uses and City of Medford and Jackson County zoning, formerly lower intensity land uses could be change to residential, commercial, and industrial uses. The build alternatives could increase pressure to rezone industrial land to commercial, but this is uncertain. While the bypass would provide very good regional access, the area around the proposed Vilas Road Interchange is not as central in the region as other areas where major commercial development is planned, in particular the proposed Northgate development southwest of the project area, as shown on Figure 3.2-9.

Both build alternatives would reduce the constraints on plan amendments and zone changes under the No Build Alternative. See the description of impacts of the No Build Alternative on plan amendments and zone changes in Section 3.2.3.2. Under the build alternatives, the bypass and existing OR 62 would have capacity to handle additional trips generated by larger scale development allowed by plan amendments and zone changes. As Table 3.2 6 shows, the build alternatives would substantially reduce v/c ratios at OR 62 intersections in Primary API Subarea 1 compared to the No Build Alternative. Under the SD Alternative, in Primary API Subarea 1, v/c ratios would meet the applicable OHP mobility performance target or City of Medford standard at all signalized intersections in both 2015 and 2035. In addition, the new interchange and bypass would provide an alternative route to and from I-5. Similarly, in Primary API Subarea 1, the DI Alternative meets the applicable OHP mobility performance target or City of Medford standard at all signalized intersections in 2015. However, in 2035, the DI Alternative would fail to meet the applicable target at the southbound I-5 off-ramp terminal, although it would meet the City of Medford standard.

**Figure 3.2-9** 

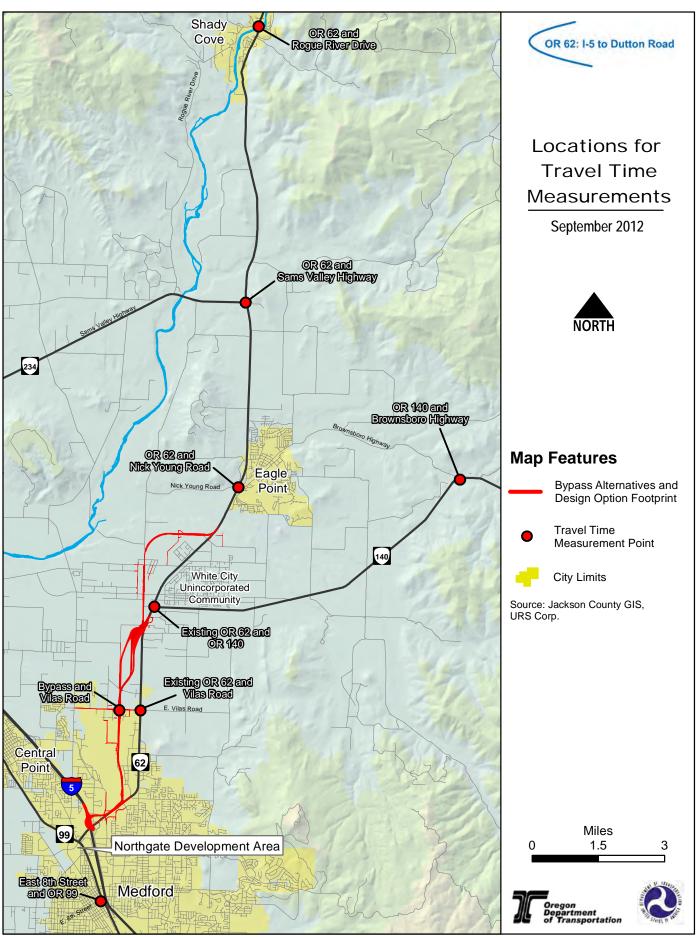
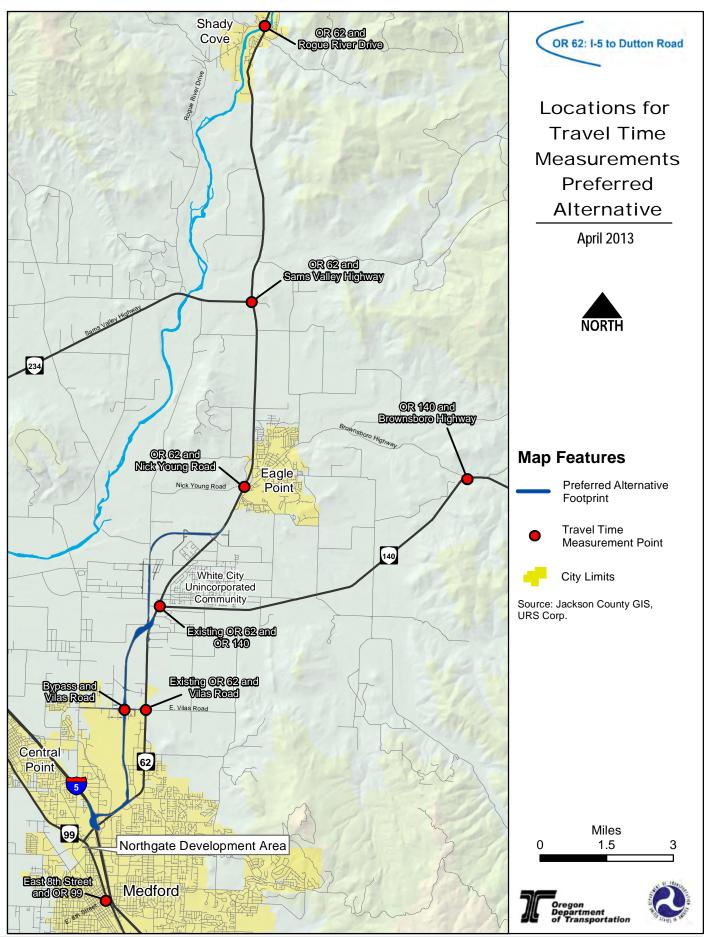


Figure 3.2-9 FEIS



## Impacts Specific to the SD Alternative

The SD Alternative would have comparatively limited indirect impacts on land use between the North Medford Interchange and Delta Waters Road for two reasons. First, there would be no direct access to the bypass and the alternative would leave the existing roadway network, including existing OR 62, largely unchanged. Second, the area now has excellent regional access and this would continue under either this alternative or the No Build Alternative. The land along Biddle Road west of the bypass could become more attractive for commercial development because congestion in the area would be reduced, compared to the No Build Alternative. The zoning would allow some types of commercial uses, but not others.

# Impacts Specific to the DI Alternative

Land use along existing OR 62 between the North Medford Interchange and Delta Waters Road would likely remain commercial, but the types of commercial uses located there could change over time. Congestion in the area would be reduced, increasing accessibility to the area. Access to individual parcels would shift from OR 62 to local roadways. As described in Section 2.1.2.2, Skypark Drive and Corona Avenue would be extended to become through streets between Poplar Drive and Delta Waters Road. Businesses on the south side of OR 62 would be accessed via Skypark Drive.

Table 3.2-6 Signalized Intersection Operations, No Build and Build Alternatives (peak hour volume to capacity ratios)

		Existing	No Build Alternative		SD Alternative		DI Alternative	
Intersection	Target	(2007)	2015	2035	2015	2035	2015	2035
I-5 SB & OR 62	0.85 <sup>1</sup>	0.73	0.75	0.87	0.71	0.79	0.77	0.88
I-5 NB & OR 62	0.85 <sup>1</sup>	0.67	0.69	0.75	0.63	0.70	0.70	0.77
Bypass & I-5 NB on-ramp	0.85 <sup>1</sup>	NA	NA	NA	0.63	0.83	NA	NA
Poplar Dr. & OR 62	0.85 <sup>1</sup>	1.02	1.04	1.05	0.82	0.93	NA	NA
Delta Waters Rd. & OR 62	0.85 <sup>1</sup>	0.86	0.88	1.00	0.70	0.81	0.65	0.70
Owen Dr. & OR 62	0.85 <sup>1</sup>	NA <sup>4</sup>	0.70	0.92	0.53	0.62	0.47	0.53
Coker Butte Rd. & OR 62	0.85 <sup>1</sup>	NA <sup>4</sup>	0.75	0.88	0.42	0.51	0.37	0.45
Vilas Rd. & OR 62	0.85 <sup>1</sup>	0.86	0.99	1.38	0.44	0.56	0.40	0.49
Bypass & Vilas Rd.	0.85 <sup>2</sup>	NA	NA	NA	0.44	0.52	0.45	0.50
Bypass & OR 62	0.85 <sup>3</sup>	NA	NA	NA	NA	NA	NA	NA
OR 140 & OR 62	0.85 <sup>3</sup>	0.86	1.00	1.54	0.82	1.04	0.81	1.06
Antelope Rd. & OR 62	0.85 <sup>3</sup>	0.83	0.84	1.09	0.73	0.93	0.79	0.95
Ave. G & OR 62	0.85 <sup>3</sup>	0.68	0.69	0.89	0.47	0.57	0.46	0.56
Ave. H & OR 62	0.853	0.69	0.72	0.88	0.37	0.59	0.35	0.44

Note: NA means not applicable.

<sup>1</sup>OR 62 is a "Freight Route on a Statewide Highway" and "Statewide Expressway" and located in an MPO inside a UGB. See Table 6 on page 83 of the OHP as amended December 21, 2011.

Note: For comparison, all targets are from the Oregon Highway Plan. See Table 3.1-8 for the applicable City of Medford and Jackson County standards. Under the build alternatives, it is anticipated that existing OR 62 would be transferred to the City of Medford and Jackson County consistent with OHP Policy 1H.4(g). At that time, adopted City of Medford mobility standard of LOS D, which would apply to the OR 62 intersections with Poplar Drive, Delta Waters Road, Owen Drive, Coker Butte Road, and Vilas Road and the Jackson County mobility standard of v/c .95 would apply to the OR 62 intersections with Antelope Road and Avenues G and H.

<sup>4</sup>This intersection did not exist in 2007.

Source: Land Use and Planning Technical Report, June 2012.

 $<sup>^2</sup>$ OHP Action 1F.1. See language beginning on line 20 of page 8 of the amendments adopted December 21, 2011.

<sup>&</sup>lt;sup>3</sup>OR 62 is classified as a Statewide Expressway. ODOT interprets the target inside an MPO as applying, because the area is within the Rogue Valley MPO, notwithstanding that the intersections are outside UGBs.

For some businesses, this access would be less direct than under the No Build Alternative. Those businesses dependent on drive-by patronage, such as fast-food restaurants, may change to a type of commercial use that is less dependent on drive-by patronage.

# Primary API, Subarea 2, Between the Medford UGB and the White City UUCB

The build alternatives are the same in Subarea 2 and have the same three design options. The land use impacts of the design options would be similar along OR 62, but different west of OR 62.

## Impacts Common to Both Build Alternatives

The build alternatives would likely accelerate development of undeveloped land along existing OR 62 compared to the No Build Alternativ because the build alternatives would improve regional access to the undeveloped land in two ways. First, the build alternatives would reduce travel times and congestion on existing OR 62 by diverting traffic from existing OR 62. Second, the bypass would provide an alternative route to existing OR 62 in Subarea 2 and reduce the travel time to Subarea 2. The bypass route would be access-controlled along the bypass, itself, and Vilas Road east of the bypass/Vilas Road interchange would be widened to five lanes with improved access management, as described in Section 2.1.2.3. Five lanes and improved access would substantially reduce travel times. As shown in Table 3.2-5, the travel time to OR 62 and Vilas Road via the bypass under the build alternatives is projected to be 28 percent lower than on existing OR 62 under the No Build Alternative in 2015 and 39 percent lower in 2035. The development along existing OR 62 would likely be industrial on the west side and commercial on the east side, based on Jackson County zoning.

For the same reasons as described in the discussion of Subarea 1, the build alternatives could enable approval of plan amendments and zone changes that might be constrained under the No Build Alternative.

# Impacts that Differ Between the Build Alternatives

The design options would differ in how they would impact the land west of existing OR 62 zoned EFU and OSR.

#### Land Zoned EFU

In addition to directly converting some EFU land to roadway use, as described in Section 3.2.3.1, the build alternatives have the potential to indirectly convert to nonfarm use of some EFU land that is now farmed. This section discusses the potential indirect conversions and how they would combine with the direct conversions.

The build alternatives have the potential to indirectly convert farmland to nonfarm use by creating parcels of farmland that are isolated and may be too small for continued farming. This is only a potential impact because whether a build alternative design option would have this effect is uncertain for two reasons. The first reason is that small parcels are farmed in the project area. For example, hay is grown on a 5.7-acre parcel of land on Gregory Road west of Agate Road (the Whitehead property referred to below). A common practice in the area is to grow hay and/or graze cattle at dispersed locations. This is partly because some farmers own land at dispersed locations and partly because hay is commonly grown in rotation with cattle grazing. To accommodate rotation, some farmers move cattle around to other land that they own or lease. The second reason for the uncertainty is that, except for non-use (i.e., leaving land vacant), non-farm uses would require amendments to the Jackson County Comprehensive Plan, including Statewide Planning Goal exceptions, and a zone change. Such changes must meet rigorous standards that favor the protection of farmland.

In combination with the direct impacts discussed in Section 3.2.3.1, Design Option A would have the potential to indirectly convert the most land to nonfarm use, Design Option C the least land, and Design Option B slightly more than Design Option C. For each owner of EFU land adjacent to one or more of the design

options, Table 3.2-7 shows how much land each design option would directly convert to roadway use, how much land would remain west of the bypass, and how much land would remain east of the bypass. Figures 3.2-10, 3.2-11, and 3.2-12 illustrate these impacts. Land west of the bypass would be adjacent to other agricultural land and most would likely continue in farm use. In particular, under Design Options A and B, the remaining parcels of the Gutches property west of the bypass would likely be farmed in tandem with other land elsewhere in the area. Land east of the bypass under Design Options A and B would potentially convert to nonfarm use. Under Design Option A, the bypass would isolate a 20-acre parcel of the Gutches property from other farmland. Under Design Option B, the bypass would isolate a parcel of the Gutches property of about 5 acres from other farmland. However, conversion to nonfarm use is not a certainty, for three reasons. The first reason is the practice of farming dispersed small parcels described above. The second reason is that the present access to the isolated parcels would remain under both design options. The third reason is that the plan amendments and zone changes needed to allow other uses would have to meet rigorous standards that favor the protection of farmland, as referenced above. While Design Option C would leave about 100 acres of land east of the bypass(consisting of the Sims property and most of the Gutches property), the land would not be isolated and would likely remain in farm use.

The total direct and potential indirect conversion of EFU land in Primary API Subarea 2 would be about 37 acres under Design Option A, about 21 acres under Design Option B, and about 18 acres under Design Option C. These are the sums of the number of acres each design option would convert to roadway use, as shown in Table 3.2-7, and the number of acres each design option has the potential to convert to nonfarm use, as described above.

Table 3.2-7 Estimated Direct and Isolation Impacts of Build Alternative Design Options on Land Zoned EFU, By Ownership

	0wner					
	Fjarli	Gutches	Sims	Sutton	Young	Total
Existing Property Size	3.2	92.6	5.0	178.6	31.8	311.1
Design Option A						
Used for Bypass and Justice/Gregory Connector Rd. <sup>1</sup>	0	14.7	0	0.7	1.6	17.0
Remaining West of Bypass <sup>2</sup>	3.2	58.0	5.0	178.0	30.2	274.3
Remaining East of Bypass <sup>3</sup>	0	19.9	0	0	0	19.9
Design Option B						
Used for Bypass and Justice/Gregory Connector Rd. <sup>1</sup>	0	13.8	0	0.7	1.6	16.0
Remaining West of Bypass <sup>2</sup>	3.2	73.8	5.0	178.0	30.2	290.1
Remaining East of Bypass <sup>3</sup>	0	5.0	0	0	0	5.0
Design Option C						
Used for Bypass and Justice/Gregory Connector Rd. <sup>1</sup>	1.2	9.9	0	0.7	6.4	18.2
Remaining West of Bypass <sup>2</sup>	1.9	0.1	0	178.0	13.5	193.4
Remaining East of Bypass <sup>2</sup>	0	82.5	5.0	0	12.0	99.5

Note: Some numbers do not add up because of rounding. Acreages of right-of-way impacts are estimates and are presented here to provide a general idea of potential impacts.

Source: Land Use and Planning Technical Report.

<sup>&</sup>lt;sup>1</sup> Considered direct impacts.

<sup>&</sup>lt;sup>2</sup> Available for farm use.

<sup>&</sup>lt;sup>3</sup> Considered indirect impacts.

In addition to the conversion impacts, the build alternatives would impact farm operations. Design Options A and B would separate the house and barn of the Gutches property from most of the property's farmland, which would be on the west side of the bypass. This is why, while farm use could continue, as stated above, that farm use would be by other than the current owners. Design Option C would not have this effect. Similarly, Design Options A and B could alter the farm uses of the Sims property. These are horse boarding and training and cattle grazing. Section 3.3 identifies the Sims property as a potential residential displacement under Design Options A and B because the bypass would remove the existing access to the property from OR 62. If the project acquired the property and relocated the resident, the land would be sold to a new owner and farm use of the property would likely continue, but only for cattle grazing, not for horse boarding and training. It is also possible that, instead of acquiring the Sims property, the project would provide access to it from the Justice/Gregory connector road. In that case, the distance to the property line and horse training paddock from the bypass would be less than 100 feet under Design A and about 200 feet under Design Option B. According to the owner, traffic on the bypass and the associated noise would be incompatible with horse training and boarding under either Design Option A or B. Therefore, even if alternative access is provided to the Sims property, Design Options A and B could limit farm use of the property to cattle grazing. Design Option C would not have these impacts because the roadway would be about 800 feet from the property and would not remove the existing access to the property from existing OR 62.

#### Land Zoned OSR.

The build alternatives would have very limited indirect impacts on land zoned OSR. Most of this land is now vacant. Most of the land not used for the bypass would likely remain vacant with or without the bypass. This is because the build alternatives would not alter the reasons the land is vacant, which include:

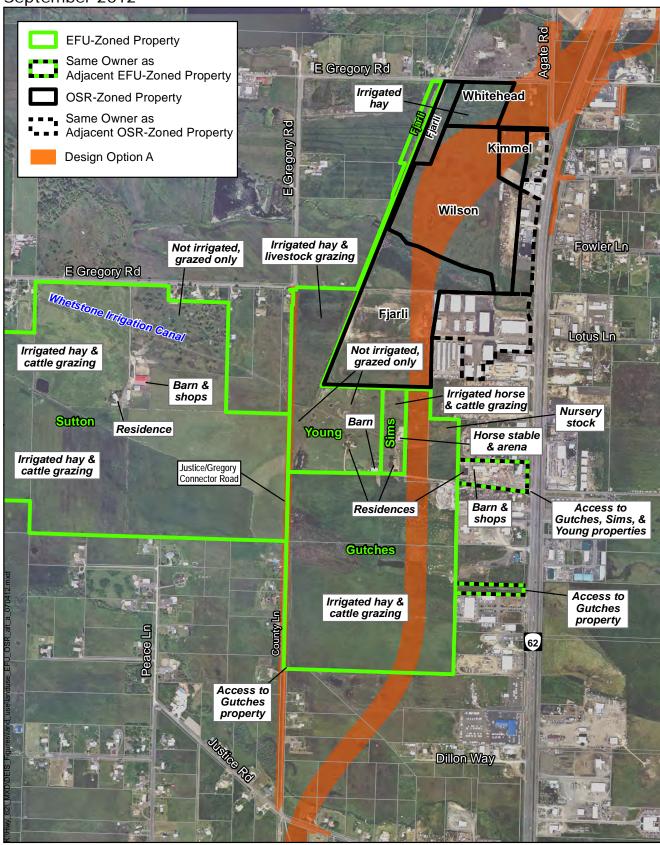
- The OSR zoning, which does not allow commercial or industrial uses and severely limits residential uses;
- None of the land has been in forest use in modern times and, previous to becoming vacant, about one-half of the land was used for a lumber mill (prior to adoption of the OSR zoning), which indicate that the land may not be suited to timber harvesting;
- The presence of vernal pool fairy shrimp, an Endangered Species Act threatened species, may limit cultivation practices and limit farm use to light to moderate grazing; and
- The split zoning of these land parcels designates the eastern portion of the parcels adjacent to OR 62 for commercial and industrial uses and the western portions of the parcels OSR. Cattle grazing is likely the only feasible use for the western portion of the parcels.

The one OSR-zoned property that is not vacant is the 5.7-acre Whitehead property, as shown on Figures 3.2-10, 3.2-11, and 3.2-12, which is currently in farm use. Design Option C would reduce the Whitehead parcel to less than 3 acres. Section 3.3 identifies this partial acquisition of this property. This property is not identified as a full acquisition in Section 3.3 because the acreage remaining could be used for other purposes. However, according to the current owners of this property, they cannot continue to farm on this property with fewer than 3 acres. Therefore, this property could become vacant because: 1) it may not be economically viable to cultivate a parcel less than 3 acres; 2) rezoning to commercial, industrial, or residential use would require amendment of the Jackson County Comprehensive Plan, including exceptions to Statewide Planning Goals; and, 3) ODOT plans to acquire access control along Gregory Road, which provides access to the Whitehead property and, while ODOT would allow access for farm use, it would not allow access for other uses. Design Options A and B would reduce the size of the Whitehead property by small amounts and would not affect its continued cultivation.

Some of the land zoned OSR may be developed for residential use. The owners of the Fjarli property have obtained approval to build three dwellings on the property under Oregon's Ballot Measure 49. The design options would likely affect where these dwellings are built, but not whether they are built.



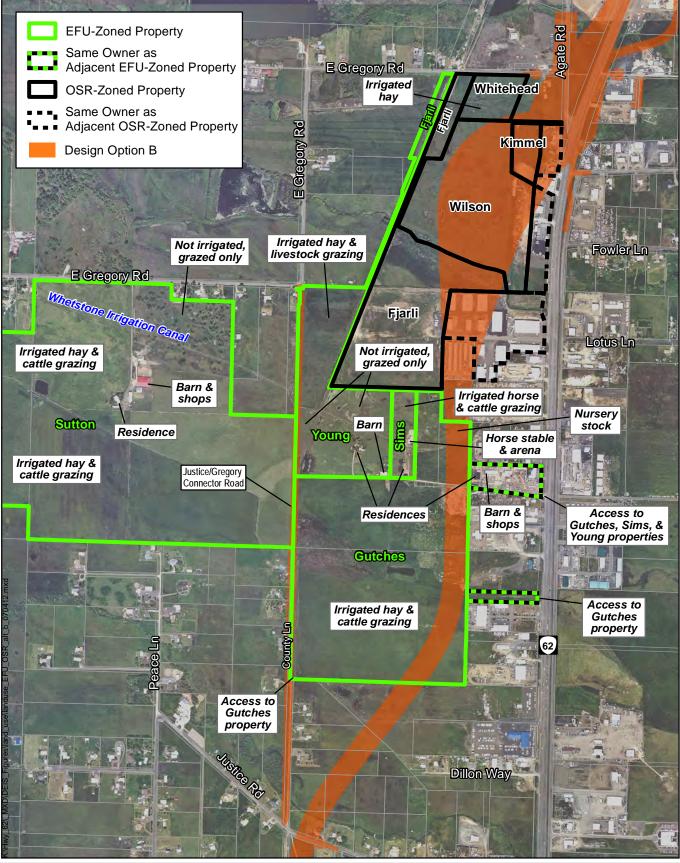




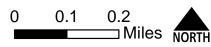
EFU and OSR Properties, Build Alternative Design Option B September 2012

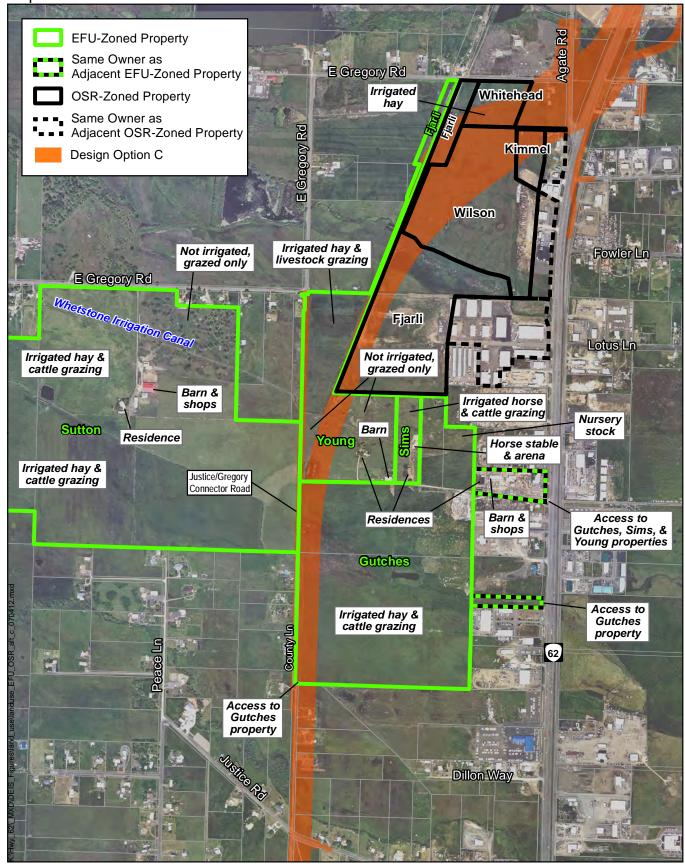
0.1 0 0.2 ☐ Miles NORTH





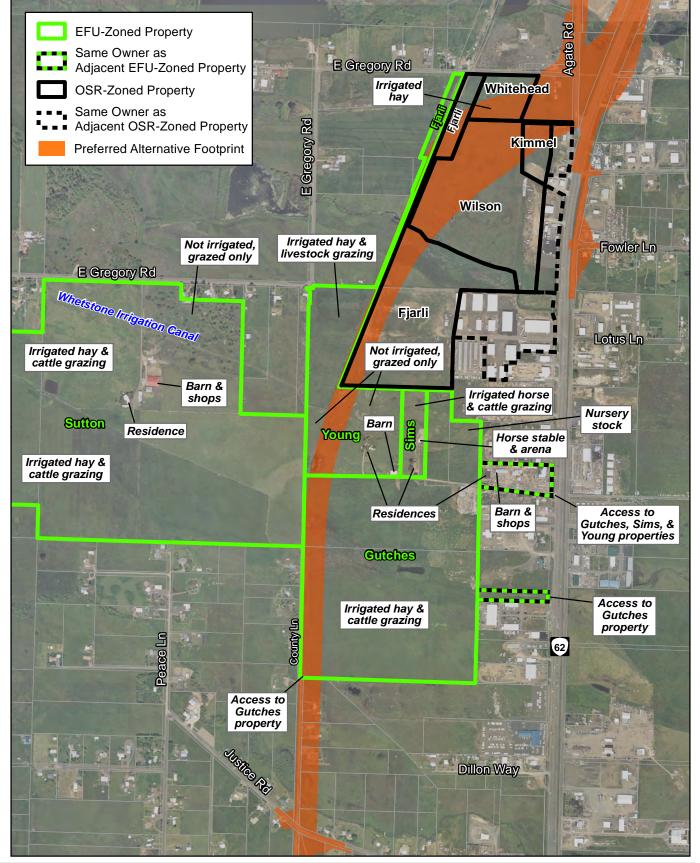
EFU and OSR Properties, Build Alternative Design Option C September 2012





EFU and OSR Properties, Preferred Alternative April 2013

0 0.1 0.2 Miles NORTH



# Primary API, Subarea 3, White City Unincorporated Community and **Adjacent Lands to the North**

The impacts of the build alternatives in Primary API Subarea 3 would be the same because the roadway improvements in Subarea 3 would be identical and the travel time savings would be similar. Likewise, the only differences among the design options are in the footprints of the directional interchange just inside the southern White City UUCB. While these differences make small differences in direct impacts, they do not affect indirect impacts.

## White City

The build alternatives would likely accelerate development or redevelopment of the land along OR 62 within White City as allowed by the zoning, compared to the No Build Alternative, by substantially improving regional access to the land. As Table 3.2-5 shows, compared to the No Build Alternative, the SD Alternative would reduce the PM peak-hour travel time from downtown Medford to the intersection of OR 62 and OR 140 by 7 minutes in 2015 and 11 minutes in 2035, and the DI Alternative would reduce this travel time by similar amounts. These are reductions of 26 to 30 percent in 2015 and of 37 to 44 percent in 2035, depending on the alternative. Large-scale, intensive commercial development like large, regional shopping centers, is unlikely because there are no large tracts of undeveloped land zoned commercial and because of the Jackson County policy to limit commercial development in White City "in scope and intensity to serve the needs of the surrounding unincorporated population." Because the location of this stretch of OR 62 is near the periphery of the urbanized portion of the region, such development could also be for low-intensity commercial uses, such as sales of mobile homes. Also, because of reduced travel times, the build alternatives would accelerate the development of currently undeveloped land zoned industrial and residential located away from OR 62 in White City.

# Land North of White City

It is unlikely that the build alternatives would indirectly alter land use north of White City in the Primary API because the land is outside the White City UUCB and is mostly zoned EFU or OSR. Development of EFU and OSR land is tightly restricted and changes to EFU and OSR zoning outside UGBs and UUCBs is difficult to secure. The area is not included in any of the urban reserves proposed in the Greater Bear Creek Valley Regional Plan, describedin Section 3.2.2.3. With one exception, the build alternatives would not fragment resource lands in Primary API Subarea 3. Although the build alternatives would convert EFU and OSR lands to roadway use, the land they would use would be along the boundaries of these zones with non-resource zones. Neither build alternative would block access to tracts of land zoned EFU or OSR without providing alternative access.

The exception is a triangular, 4.7-acre, currently vacant parcel of land zoned EFU in the northwest quadrant of the intersection of OR 62 with Dutton Road, labeled "EFU Parcel on Figure 2-4, Sheet 13. The parcel is outside the White City UUCB, but is part of a tax lot that also includes land on the south side of Dutton Road, which is located within the White City UUCB and is zoned General Industrial (I-G). The build alternatives propose vacating Dutton Road and the elimination thereof would physically reconnect the EFU portion and the I-G portions of the tax lot and provide access to the EFU portion from OR 62. Such circumstances might provide a factual basis to support a rezoning of the land to I-G. Such conversion would require a zone change and amendments to the Jackson County Comprehensive Plan, including Statewide Planning Goal exceptions.

# **Summary of Impacts on Land Zoned EFU and OSR in Primary API**

Under both build alternatives, the combined direct and potential indirect conversion of land zoned EFU in Subareas 2 and 3 of the Primary API are 52 acres under Design Option A, 36 acres under Design Option B, and 33 acres under Design Option C. These are the sums of the EFU land converted to public right-ofwayand the EFU land in Subarea 2 potentially converted to nonfarm use. Under both build alternatives, the combined direct and potential indirect conversion of

land zoned OSR in Subareas 2 and 3 of the Primary API are 37.7 acres under Design Option A, 42 acres under Design Option B, and 45 acres under Design Option C. These are the sums of the OSR land converted to public right-of-way and the OSR land in Subarea 2 that is now farmed and could become vacant under Design Option C. See Section 3.2.3.2 for more detail regarding impacts on land zoned EFU and OSR in the primary API.

The removal of the Justice/Gregory connector road from the Preferred Alternative will reduce the amount of direct and indirect conversion of EFU land by 2.8 acres.

# **Secondary API**

# Eagle Point

The build alternatives would likely result in more development over time in Eagle Point, as allowed by Eagle Point's comprehensive plan, because the build alternatives would make Eagle Point a more desirable place to live. The build alternatives would do this by reducing commute travel times between downtown Medford and Eagle Point. See the travel times to OR 62 and Nick Young Road in Table 3.2-5. Forecasted travel times under the SD and DI Alternatives in 2015 are 31 percent and 24 percent lower than under the No Build Alternative, respectively, and nearly 40 percent lower in 2035. In addition, the build alternatives would reduce the constraints on plan amendments and zone changes under the No Build Alternative described in Section 3.2.3.2 by reducing the number of intersections with violations of mobility performance targets. As Table 3.2 6 shows, both alternatives would substantially reduce v/c ratios at most OR 62 intersections in the Primary API, compared to the No Build Alternative. Using the OHP mobility performance targets in Table 3.2 6 for comparison, under the SD Alternative in 2015, v/c ratios would not exceed the listed target at the intersections of OR 62 with Poplar Drive and OR 140 and, in 2035, at these intersections as well as at the intersections of existing OR 62 with Delta Waters Road and AntelopeRoad. The SD Alternative would also add interchanges at I-5 and at Vilas Road. These interchanges would help reduce the constraints. Under the DI Alternative, in 2015, v/c ratios would not exceed the OHP target at the any intersection but, in 2035, v/c ratios would fail to meet the target only at the intersections of OR 62 with the I 5 southbound ramps, OR 140, and Antelope Road. The DI would add an interchange at Vilas Road, but not at I-5.

# Shady Cove

As with Eagle Point, the build alternatives would likely result in more pressure for development in Shady Cove by making it a more desirable place to live by reducing commute travel times to it. As shown in Table 3.2-5, under the No Build Alternative, commute travel times to Shady Cove would be long enough to deter many commuters by 2015. By 2035, travel time from downtown Medford to Shady Cove is projected to be 51 minutes, meaning it would be over an hour for some commutes, depending on travel beyond the beginning and end points in the table. By 2035, the reduction in travel times by 14 minutes to approximately 37 minutes under the build alternatives would be substantial.

#### Rural Areas

The build alternatives would encourage more rural residential development in the Secondary API outside the UGBs of Medford, Eagle Point, and Shady Cove, but the amount would be limited by the number of additional dwellings allowed by Jackson County zoning. This type of development would be the placement of a new single-family home on a land parcel. As the travel times to OR 62 and Sams Valley Highway and OR 140 and Brownsboro Highway in Table 3.2-5 show, the build alternatives would substantially reduce commute travel times to rural parts of the Secondary API. However, the analysis of the indirect impacts of the No Build Alternative above also applies to the build alternatives. The Jackson County Planning Department states that the number of additional dwellings allowed under current zoning is limited. In addition, the Oregon Statewide Planning Program does not permit rezoning rural areas like these to allow large amounts of additional rural residential, commercial, or industrial development.

## **JTA Phase**

# Primary API Subarea 1, Inside the Medford UGB and Adjacent Lands to the

Impacts Between the North Medford Interchange and the Vicinity of Delta Waters Road

Land use along existing OR 62 between the North Medford Interchange and Delta Waters Road would remain commercial. Figure 3.2-2 shows the location of Delta Waters Road. The JTA phase would strengthen the attractiveness of the area for commercial uses by improving regional access to the area and reducing traffic congestion in the area, although the benefits from the reduction of congestion would decline by 2035. See the v/c ratios for the intersections of OR 62 and Poplar Drive and Delta Waters Road Table 3.2 8. Most of the businesses in the area are destination retail. With a few exceptions, OR 62 does not currently allow left-turn movements. Where allowed, left turn movements are increasingly difficult to make during peak traffic periods. Under the JTA phase, raised median would prevent left turns, but the JTA phase would allow motorists to make a U-turn at both Delta Waters Road and Poplar Road. In the future, with higher traffic volumes, this could improve southbound traffic access to businesses on the southeast side of OR 62, compared to the No Build Alternative.

# Impacts North of Delta Waters Road

The indirect land use impacts of the JTA phase on land use along OR 62 north of Delta Waters Road would be similar to the impacts of the build alternatives. As with the build alternatives, the JTA phase would improve regional access to the area and reduce traffic congestion there, but to a lesser extent than the build alternatives. Unlike the build alternatives, there would not be a bypass interchange at Vilas Road, so access to the area near OR 62 and Vilas Road would not be improved as much. For the same reason, the JTA phase would not have the impacts the build alternatives would have on the land along Vilas Road, such as the Medford Gun Club and Medford Rifle and Pistol Club properties, as described in Section 3.2.3.2.

Like the build alternatives, the JTA phase would reduce the limitations on plan amendments and zone changes under the No Build Alternative. See the description of the impact of the No Build Alternative on UGB expansion in Section 3.2.3.2. As Table 3.2 8 shows, the JTA phase would substantially reduce v/c ratios at OR 62 intersections in Subarea 1 compared to the No Build Alternative. Under the JTA phase, v/c ratios would meet the applicable OHP mobility performance target or City of Medford standard at all intersections in Subarea 1 in 2015. However, in 2035, v/c ratios would fail to meet the applicable OHP mobility performance target at the southbound I-5 on-ramp terminal, and traffic would violate the City of Medford standard at the intersection of existing OR 62 and Poplar Drive/Bullock

# Primary API Subarea 2, Between the Medford UGB and the White City **UUCB**

# Impacts Along Existing OR 62

Like the build alternatives, the JTA phase would likely accelerate development of undeveloped land along existing OR 62 compared to the No Build Alternative, but to a lesser degree. Like the build alternatives, the JTA phase would improve access to the area from elsewhere in the region by reducing travel times and congestion on existing OR 62 by diverting through traffic from existing OR 62, but by lesser amounts. In addition, the JTA phase would provide an access-controlled alternative route to existing OR 62, but only to and from the north end of Subarea 2, in contrast to the build alternatives. As shown in Table 3.2-5, the travel time to OR 62 and Vilas is projected to be 16 minutes in 2015 under the JTA phase, versus 18 minutes under the No Build Alternative and 13 minutes under the build alternatives. The travel time to OR 62 and Vilas is projected to be 17 minutes in 2035 under the JTA phase, versus 23 minutes under the No Build Alternative and 14 minutes under the build alternatives.

Table 3.2-8 Signalized Intersection Operations, No Build and JTA Phase (peak hour volume to capacity ratios)

		No Build Existing Alternative			JTA Phase		
Intersection	Target	(2007)	2015	2035	2015	2035	
I-5 SB & OR 62	0.85 <sup>1</sup>	0.73	0.75	0.87	0.77	0.88	
I-5 NB & OR 62	0.85 <sup>1</sup>	0.67	0.69	0.75	0.69	0.76	
Bypass & I-5 NB on-ramp	0.85 <sup>1</sup>	NA	NA	NA	NA	NA	
Poplar Dr. & OR 62	0.85 <sup>1</sup>	1.02	1.04	1.05	0.90	1.06	
Delta Waters Rd. & OR 62	0.85 <sup>1</sup>	0.86	0.88	1.00	0.66	0.71	
Owen Dr. & OR 62	0.85 <sup>1</sup>	NA <sup>4</sup>	0.70	0.92	0.50	0.61	
Coker Butte Rd. & OR 62	0.85 <sup>1</sup>	NA <sup>4</sup>	0.75	0.88	0.36	0.47	
Vilas Rd. & OR 62	0.85 <sup>1</sup>	0.86	0.99	1.38	0.79	0.95	
Bypass & Vilas Rd.	0.852	NA	NA	NA	NA	NA	
Bypass & OR 62	0.853	NA	NA	NA	0.71	0.84	
OR 140 & OR 62	0.85 <sup>3</sup>	0.86	1.00	1.54	0.86	1.14	
Antelope Rd. & OR 62	0.85 <sup>3</sup>	0.83	0.84	1.04	0.91	1.08	
Ave. G & OR 62	0.853	0.68	0.69	0.89	0.70	0.87	
Ave. H & OR 62	0.85 <sup>3</sup>	0.69	0.72	0.88	0.68	0.88	

Note: NA means not applicable.

<sup>1</sup>OR 62 is a "Freight Route on a Statewide Highway" and "Statewide Expressway" and location in an MPO inside a UGB. See Table 6 on page 83 of the OHP as amended December 21, 2011.

<sup>2</sup>OHP Action 1F.1. See language beginning on line 20 of page 8 of the amendments adopted December 21, 2011.

<sup>3</sup>OR 62 is classified as a Statewide Expressway. ODOT interprets the target inside an MPO as applying, because the area is within the Roque Valley MPO, notwithstanding that the intersections are outside UGBs.

Note: For comparison, all targets are from the Oregon Highway Plan. Under the JTA phase, City of Medford and Jackson County standards would apply to existing OR 62 intersections between Poplar Drive and OR 140.

<sup>4</sup>This intersection did not exist in 2007.

Source: Land Use and Planning Technical Report, June 2012.

The travel time to OR 62 at Agate Road under the JTA phase is projected to be 17 minutes in 2015 and 21 minutes in 2035, versus 21 and 26 minutes under the No Build Alternative, respectively. The development would likely be industrial on the west side and commercial on the east side, based on Jackson County zoning.

For the same reasons as described in the discussion of Subarea 1, above, the JTA phase would reduce the limitations on plan amendments and zone changes described under the No Build Alternative. While forecasted v/c ratios would fail to meet the mobility performance target at the intersection of the bypass and existing OR 62 in 2035, no plan amendments or zone changes in Subarea 2 that would affect traffic at this intersection are expected.

# Impact on the Land West of OR 62 Zoned EFU and OSR

The impacts on land zoned EFU and OSR would be similar to the impacts of the build alternatives.

## Land Zoned EFU.

In addition to directly converting some EFU land to roadway use, as described in Section 3.2.3.1, the JTA phase has the potential to indirectly convert to nonfarm use some EFU land that is now farmed. This section discusses the potential indirect conversions and how they would combine with the direct conversions.

The impacts of the JTA phase design options on land zoned EFU would be nearly identical to the impacts of the build alternative design options. Table 3.2-9 shows how much land each design option would directly convert to roadway use, how much land would remain west of the bypass, and how much land would remain east of the bypass. Figures 3.2-13, 3.2-14, and 3.2-15 illustrate these impacts. Table 3.2-9 is very similar to Table 3.2-7 and the figures are very similar to Figures 3.2-10, 3.2-11, and 3.2-12, which show the impacts of the build alternatives. The analysis of impacts of the build alternative design options in Section 3.2.3.2 can be applied verbatim to the JTA phase design options. As with the build alternative design options summarized in Section 3.2.3.2, the total direct conversion of EFU land to roadway use and potential indirect conversion to nonfarm uses in Subarea 2 under the JTA phase would be about 37 acres under Design Option A, about 21 acres under Design Option B, and about 18 acres under Design Option C.

#### Land Zoned OSR.

While the direct impacts of the JTA phase design options on OSR land would be substantially smaller than direct impacts of the build alternative design options (because there would be no interchange with OR 62 at Agate Road), the indirect impacts would be the same. Most of the land not used for the bypass would likely remain vacant with or without the bypass, because the JTA phase would not alter the reasons the land is vacant, for the reasons listed in Section 3.2.3.2. An exception is the Whitehead property, which is now in agricultural use. The Whitehead property would likely remain in agricultural use under Design Options A and B. However, Design Option C would reduce its size from 5.7 acres to about 3 acres. As with Design Option C of the build alternatives, the property could become vacant for multiple reasons: 1) the use restrictions in OSR zones referenced above; 2) it may not be economically viable to cultivate a parcel less than 3 acres; 3) rezoning to commercial, industrial, or residential use would require amendment of the Jackson County Comprehensive Plan, including exceptions to Statewide Planning Goals; and, 4) ODOT plans to acquire access control along Gregory Road, which provides access to the Whitehead property and, while ODOT would allow access for farm use, it would not allow access for other uses.

Table 3.2-9 Estimated Direct and Isolation Impacts of JTA Phase Design Options on Land

Zoned EFU, By Ownership (acres)

	0wner					
	Fjarli	Gutches	Sims	Sutton	Young	Total
Existing Property Size	3.2	92.6	5.0	178.6	31.8	311.1
Design Option A						
Used for Bypass and Justice/Gregory Connector Rd. <sup>1</sup>	0	14.7	0	0.7	1.6	17.0
Remaining West of Bypass <sup>2</sup>	3.2	58.0	5.0	178.0	30.2	274.3
Remaining East of Bypass <sup>3</sup>	0	19.9	0	0	0	19.9
Design Option B						
Used for Bypass and Justice/Gregory Connector Rd. <sup>1</sup>	0	13.7	0	0.7	1.6	15.9
Remaining West of Bypass <sup>2</sup>	3.2	73.8	5.0	178.0	30.2	290.1
Remaining East of Bypass <sup>3</sup>	0	5.1	0	0	0	5.1
Design Option C						
Used for Bypass and Justice/Gregory Connector Rd. <sup>1</sup>	1.2	10.0	0	0.7	6.2	18.1
Remaining West of Bypass <sup>2</sup>	1.9	0.1	0	178.0	13.6	193.6
Remaining East of Bypass <sup>2</sup>	0	82.5	5.0	0	12.0	99.5

Note: Some numbers do not add up because of rounding. Acreages of right-of-way impacts are estimates and are presented here to provide a general idea of potential impacts.

Source: Land Use and Planning Technical Report.

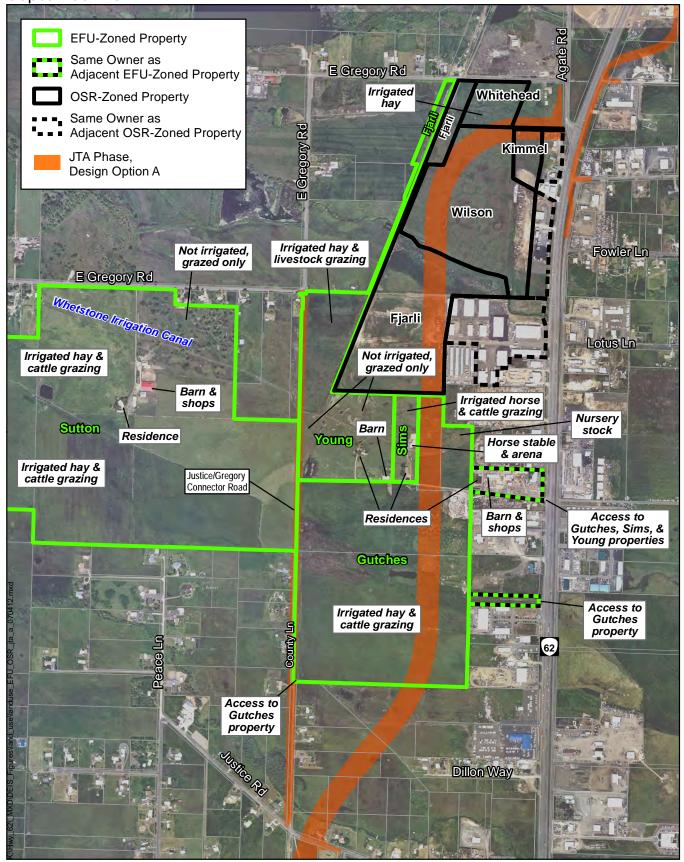
<sup>&</sup>lt;sup>1</sup> Considered direct impacts.

<sup>&</sup>lt;sup>2</sup> Available for farm use.

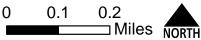
<sup>&</sup>lt;sup>3</sup> Considered indirect impacts.

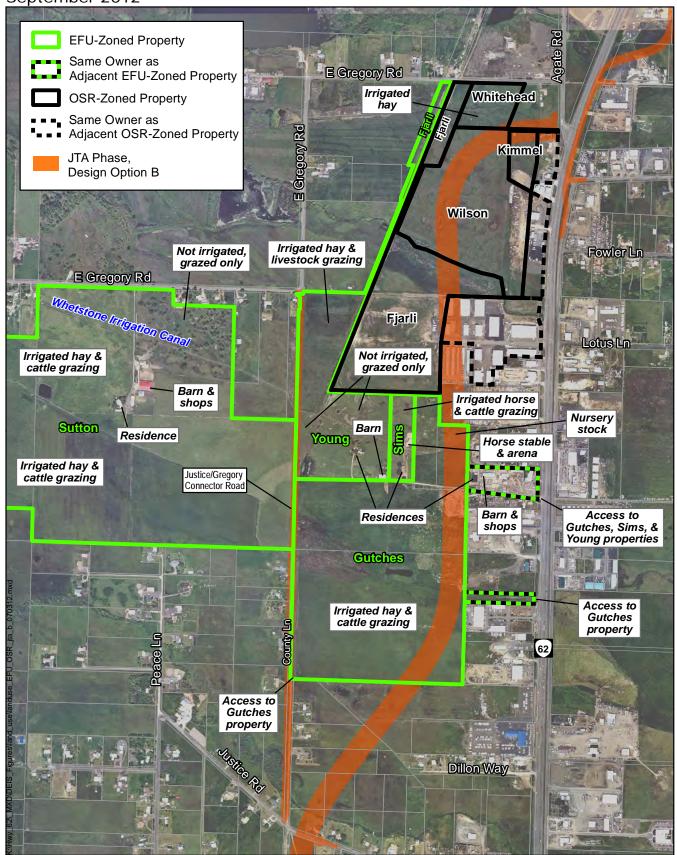
EFU and OSR Properties, JTA Phase Design Option A September 2012

0 0.1 0.2 ☐ Miles NORTH



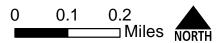
EFU and OSR Properties, JTA Phase Design Option B September 2012

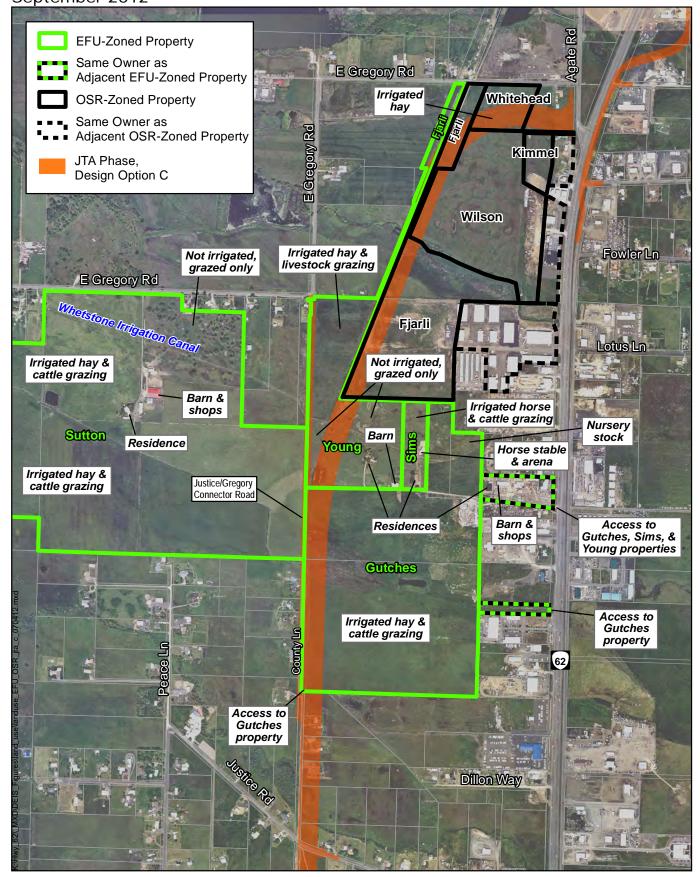




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EFU and OSR Properties, JTA Phase Design Option C September 2012





EFU and OSR Properties, JTA Phase

0 0.1 0.2 ☐ Miles NORTH April 2013 Agate Rd **EFU-Zoned Property** Same Owner as E Gregory Rd Adjacent EFU-Zoned Property Whitehead Irrigated **OSR-Zoned Property** Йaу Same Owner as E Gregory Rd Adjacent OSR-Zoned Property Kimmel JTA Phase Footprint Wilson Irrigated hay & livestock grazing Fowler Ln Not irrigated, grazed only E Gregory Rd Whetstone Indigation Ganal Fjarli Lotus Ln Irrigated hay & Not irrigated, grazed only cattle grazing Barn & Irrigated horse shops & cattle grazing Nursery stock Sutton Barn Residence Young Horse stable & arena Irrigated hay & cattle grazing Access to Gutches, Sims, & Young properties Barn & Residences shops **Cutches** Access to Irrigated hay & cattle grazing Gutches property 62 Access to Gutches property Dillon Way

# Primary API Subarea 3, White City Unincorporated Community and Adjacent Lands to the North

# White City

Like the build alternatives, as discussed in Section 3.2.3.2, the JTA phase would likely accelerate development or redevelopment of the land along OR 62 and development of other undeveloped land in White City, but to a lesser extent. As the travel times to the intersection of OR 62 and OR 140 under JTA phase in Table 3.2-5 show, the time savings compared to the No Build Alternative would be 1 or 2 minutes less than under the build alternatives in 2015, but 7 or 8 minutes, or 64 percent to 67 percent, less than under the build alternatives by 2035.

# **Land North of White City**

As with the build alternatives, it is unlikely that the JTA phase would alter land use north of White City in the Primary API. This is mainly because the land is outside the White City UUCB and is mostly zoned EFU or OSR. Development of EFU and OSR land is tightly restricted and changes to EFU and OSR zoning outside UGBs and UUCBs is difficult to secure. Also, as the travel times in Table 3.2-5 show, the time savings compared to the No Build Alternative would be similar to the build alternatives in 2015, but much less than under the build alternatives by 2035. The travel time savings to OR 62 and Nick Young Road in Eagle Point would be 2 to 4 minutes less in 2015, but 10 minutes, or 71 percent, less in 2035. The travel time to Shady Cove would be 2 to 4 minutes less in 2015, but 9 minutes, or 60 percent, less in 2035.

# Summary of Impacts on Land Zoned EFU and OSR in Primary API

Under the JTA phase, the combined direct and potential indirect conversion of land zoned EFU in Subareas 2 and 3 of the Primary API are 37 acres under Design Option A, 21 acres under Design Option B, and 18 acres under Design Option C. These are the sums of the EFU land converted to public right-of-way, as described in Section 3.2.3.1, and the EFU land in Subarea 2 potentially converted to nonfarm use, as discussed in Section 3.2.3.2. Under the JTA phase, the combined direct and potential indirect conversion of land zoned OSR in Subareas 2 and 3 of the Primary API are 16 acres under Design Option A, 11 acres under Design Option B, and 20 acres under Design Option C. These are the sums of the OSR land converted to public right-of-way, as described in Section 3.2.3.1, and the OSR land in Subarea 2 that is now farmed and could become vacant under Design Option C, as discussed in Section 3.2.3.2.

The removal of the Justice/Gregory connector road from the JTA phase will reduce the amount of direct and indirect conversion of EFU land by 2.8 acres.

# **Secondary API**

The JTA phase would likely have a comparatively small effect on land development in Eagle Point, Shady Cove, or rural areas of the Secondary API. The primary reason is that the travel time savings from Medford, as shown in Table 3.2-5, are considerably smaller than under the build alternatives. The JTA phase travel time savings range from 10 percent to 17 percent, compared to 19 to 39 percent under the build alternatives. A secondary reason is that capacity on OR 62 would likely remain a constraint quasi-judicial plan amendments and zone changes to accommodate larger scale development in Eagle Point, as explained in Section 3.2.3.2. The capacity of OR 62 would be less of a constraint than under the No Build Alternative, but substantially more than under the build alternatives.

# 3.2.3.3 Construction Impacts

#### **No Build Alternative**

The No Build Alternative would have no construction impacts.

#### **Build Alternatives**

Changes in land use resulting from construction of the build alternatives would be very limited. The long-term use of land used for temporary construction staging, such as contractor offices and storage of equipment and materials, would be affected by how the project alters access to it, but not by its use for construction. Noise, congestion, and disruptions to access during construction can interfere with business operations. Depending on the vulnerability of a business and the severity and duration of these impacts, they could cause a business to relocate or fail. However, normally, the long-term use of the land the business occupied remains in the same use category.

# 3.2.3.4 Compliance with Federal Laws and State, Regional, and Local Laws, Plans, and Policies

For the detailed analysis that this section summarizes, see the Land Use and Planning Technical Report, available by request from the ODOT person identified on page i of this EIS.

#### **Federal Policies**

The FPPA does not call for the protection of the farmland the build alternatives or JTA phase would impact. The FPPA is the only federal law or policy specifically relevant to the land use impacts of the project. Its purpose is to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to non-farm uses. Under the Act, projects like the build alternatives and JTA phase are rated. Appendix B contains the ratings of the build alternatives and JTA phase. The ratings measure the quality of the impacted agricultural land and the viability of continued farm use, if a project did not affect it. The higher the rating, the higher the quality of the impacted agricultural land and the greater viability of continued farm use if the project did not affect it. Because the ratings of the build alternatives and JTA phase fall below 160 regardless of design option, FPPA policy is that the farmland they would impact "not be given further consideration for protection."

Copies of the rating forms identifying the corridor of the Preferred Alternative and JTA phase are in Appendix B.

# **Oregon Laws, Plans, and Policies**

# **Statewide Planning Program**

Statewide Planning Goals and the Transportation Planning Rule

For the build alternatives or the JTA phase to be built, Jackson County would have to approve exceptions to Statewide Planning Goals 3, Agricultural Lands; 4, Forest Lands; 11, Public Facilities and Services; and 14, Urbanization. This is because the build alternatives in Subareas 2 and 3 and the JTA phase in Subarea 2 would use lands which are outside UGBs and which the Jackson County Comprehensive Plan designates as "Agricultural" and "Forestry/Open Space." Some categories of transportation improvements may be built outside UGBs without exceptions to Statewide Planning Goals. However, the project does not fall within any of the categories.

This subsection addresses the JTA phase before it addresses the build alternatives because the JTA phase would be built first and because the analysis of the JTA phase makes the analysis of the build alternatives easier to understand.

#### JTA Phase

ODOT would ask Jackson County to approve Goal exceptions in conjunction with adoption of the amendments to the County TSP described in Section 3.2.3.4. Goal exceptions for the build alternatives are discussed following this discussion of Goal exceptions for the JTA phase.

Any of the three design options associated with the JTA phase would likely meet the Goal exception requirements of OAR 660-012-0070, including its three principal requirements, as described below:

One or a combination of alternative modes of transportation, traffic management measures, and improvements to existing transportation facilities would not reasonably meet the transportation need. In particular, alternative modes of transportation, traffic management measures, and limited improvements to existing transportation facilities would not achieve applicable OHP mobility performance targets at most signalized intersections in the project area. In addition, major improvements to the existing highway, i.e., adding enough lanes to meet OHP mobility performance targets, would have disproportionately higher construction costs and displacement impacts than the JTA phase. See the discussion of the Enhanced Existing Highway Alternative, immediately below.

Non-exception locations cannot "reasonably accommodate the proposed transportation improvement or facility." A "non-exception location" means an alternative that would not require Goal exceptions. ODOT studied two alternatives that would meet project need, but would not require Goal exceptions because they would follow the existing OR 62 alignment. The first such alternative was the Enhanced Existing Highway Alternative. This alternative would widen OR 62 to eight lanes, the number of lanes needed to meet OHP mobility performance targets at intersections. This alternative would not "reasonably accommodate the proposed transportation improvement or facility" because its estimated \$259 million construction cost is 2.1 times the \$125 million budget available for the JTA phase, and this alternative would displace 37 commercial and industrial structures and one dwelling unit. This compares to the six to 12 commercial and industrial structures and three to seven dwelling units the JTA phase would displace. The second alternative that would not require Goal exceptions was the Texas Turnaround Alternative. The Texas Turnaround Alternative would make the existing highway a limited-access expressway and interconnect it with Crater Lake Avenue on the east side of the highway and a new, parallel local road on the west side. Like the Enhanced Existing Highway Alternative, the Texas Turnaround Alternative would not "reasonably accommodate the proposed transportation improvement or facility." It's estimated \$400 million construction cost is 3.3 times the budget available for the JTA phase, and the Texas Turnaround Alternative would displace 87 commercial and industrial structures and three dwelling units, compared to JTA phase displacements.

The JTA phase, regardless of design option selected, would also meet the third principal requirement for Goal exceptions. That requirement is that its net adverse impacts, with mitigation measures, would not be significantly more adverse than the net impacts from other alternatives which would also require Goal exception. This must be based on a comparison of long-term economic, social, environmental, and energy consequences. ODOT conducted such a comparison of the Design Options A, B, and C. That comparison demonstrated that the impacts of the design options are for the most part similar to each other. In instances where one type of impact of a design option is greater, lower levels of other types of impacts counterbalance the greater impact. For example, Design Option B would displace the most commercial and industrial structures, but also displace the lowest acreage of wetlands. In addition, the net impacts of the JTA phase would be significantly lower than the net impacts of another alternative, the Existing Highway Build Alternative, ODOT considered that would require Goal exceptions. Under the Existing Highway Build Alternative, the existing highway would become a limited-access expressway, Crater Lake Avenue would provide access to adjoining properties on the east side of the highway, and Lear Way would provide access to adjoining properties on the west side of the highway. Lear Way would be extended north, outside the Medford UGB, thus requiring Goal exceptions. In addition, Crater Lake Avenue would be realigned to separate its intersection with Vilas Road from the intersection of OR 62 with Vilas Road. This realignment would also extend outside the Medford UGB, requiring Goal exceptions. The extension of Lear Way would have impacts similar to the JTA phase.

Therefore, the Existing Highway Build Alternative would combine many of the impacts of the JTA phase, the impacts of realigning Crater Lake Avenue, and the impacts of making the existing highway an expressway. The Existing Highway Build Alternative's displacement impacts would be substantially higher than the impacts of the JTA phase: 64 commercial and industrial structures versus six to 12 under the JTA phase and 16 dwelling units versus the three to seven under the JTA phase. In addition, its estimated construction cost of \$311 million is 2.5 times the \$125 million budget for the JTA phase.

ODOT and Jackson County have coordinated in the development of the OR 62: I-5 to Dutton Road project for over 7 years. ODOT has assisted the County in preparing the amendments and associated Statewide Planning Goal exceptions to add the JTA phase to the Jackson County Comprehensive Plan. There has been no opposition to the amendments and Goal exceptions and they are expected to be adopted in the spring of 2013.

#### **Build Alternatives**

Goal exceptions would be needed for the future northern extension of the alignment beyond the JTA phase that makes up either of the build alternatives. The extension of the bypass north through White City to connect with OR 62 would be subject to exceptions to Goals 3, 4, 11 and 14. The exceptions to Goals 3 and 4 would be required because the portion of the bypass on the north side of Dutton Road, as shown on Index Sheets 12 and 13 of Figure 2-4, would use lands which the Jackson County Comprehensive Plan designates as "Agricultural" and "Forestry/Open Space." The development of the directional interchange at Agate Road would be subject to a conditional use permit.

To justify Goal exceptions for the additional improvements, it would be necessary to establish that an extension of the JTA phase Enhanced Existing Highway Alternative north of Agate road would not "reasonably accommodate the proposed transportation improvement or facility." See the description of the Enhanced Existing Highway Alternative in the discussion of Goal exceptions for the JTA phase. An extension of the JTA phase of an Enhanced Existing Highway Alternative would widen OR 62 to six to eight lanes north of Agate Road. Under the Goal exception process, to determine whether an extension of an Enhanced Existing Highway Alternative could reasonably accommodate the identified transportation need, Jackson County would need to establish and justify "thresholds" relevant to the project that act as benchmarks for determining reasonableness. Such thresholds would include cost, operational feasibility, displacements, and other relevant factors. Such other relevant factors might include, for instance, impacts on historic properties or Section 4(f) resources or consistency with Jackson County Comprehensive Plan policies and objectives, such as policies on White City. Today, the cost and displacements of an Enhanced Existing Highway Alternative do not appear to be unreasonable. However, until Jackson County establishes the thresholds to justify Goal exceptions, it is premature to predict the success of Goal exceptions.

Another consideration is that White City is in the process of incorporating as a city and is adopting its own comprehensive plan and TSP. It is possible that the alignment of the preferred alternative would be inside the future UGB of White City, when an extension of the bypass north of Agate Road is constructed, eliminating the need for Goal exceptions at all. Because other factors play into the mix, it is premature at this time to conclude that an extension of the bypass north of the JTA phase would require Goal exceptions or would meet the criteria for those Goal exceptions.

Amendment of the Jackson County Comprehensive Plan and associated Goal exceptions to add the additional improvements under the build alternatives to the Jackson County Comprehensive Plan will need to occur prior to construction of the additional improvements beyond the JTA phase. When funding for the build alternatives is identified, ODOT would assist Jackson County in preparing the Comprehensive Plan amendments and Goal exceptions.

# ODOT's State Agency Coordination Program

Statewide Planning Program law requires ODOT and other state agencies to carry out their duties "in a manner compatible with" local comprehensive plans and land use regulations. In addition, state agencies are required to have policies to coordinate with other agencies and local governments in the performance of their duties under the Statewide Planning Program. ODOT implemented these requirements as applied to projects like the OR 62: I-5 to Dutton Road Project by adopting an administrative rule, referred to as ODOT's State Agency Coordination Program (SAC). The SAC requires that local jurisdictions adopt needed plan amendments and zone changes before issuance of a final EIS. This includes the Goal exceptions described above. However, such amendments are not necessary if a project is phased. The relevant provision states:

The Department may complete a Final Environmental Impact Statement or Revised Environmental Assessment before the affected cities and counties make necessary plan amendments and zone changes when the following requirements are met:

- (a) The Final Environmental Impact Statement or Revised Environmental Assessment identifies that the project be constructed in phases; and
- (b) The Department finds:
  - (A) There is an immediate need to construct one or more phases of the project. Immediate need may include, but is not limited to, the facility to be improved or replaced currently exceeds or is expected to exceed within five years the level of service identified in the Oregon Highway Plan; and
  - (B) The project phase to be constructed meets a transportation need independent of the overall project, is consistent with the purpose and need of the overall project as identified in the FEIS, and will benefit the surrounding transportation system even if no further phases of the project are granted land use approval.

The JTA phase meets these requirements. In particular, there is an immediate need for the JTA phase for two reasons. First, four of the nine signalized intersections on OR 62 in the project area fail to meet the applicable OHP mobility performance target, as Table 3.1-2 shows. Second, traffic congestion and the configuration of the southern portion of OR 62 in the project area are causing excessive crash rates. This is described in Section 3.1.2.3. In addition, the JTA phase would meet a transportation need independent of the full build-out alternatives because completion of the JTA phase would reduce the number of signalized intersections that fail to meet the applicable mobility performance target. As Table 3.1-12 shows, the JTA phase would reduce to two the number of these intersections and substantially reduce the v/c ratio at each of the three intersections, compared to the No Build Alternative. Congestion would remain lower than under the No Build Alternative, even if the directional interchange at Agate Road and extension of the bypass north through White City to connect with OR 62 at Dutton Road Project under the build alternatives were not constructed.

Because the JTA phase meets these requirements, this provision would allow ODOT to forward an FEIS to FHWA for the build alternatives without Jackson County first adopting Goal exceptions for the build alternatives. The phasing provision would require Jackson County adoption of the Goal exceptions for the JTA phase described above and amendment of its TSP to include the project, as

described in Section 3.2.3.4, before the initiation of construction of the JTA phase.

If a build alternative is selected, under the OHP, Jackson County and Medford must consider protecting "the regional and statewide mobility function of the new bypass through their comprehensive plan, transportation system plan, and implementing ordinances" before the Oregon Transportation Commission would authorize funding the project.

Similarly, Jackson County and Medford must consider developing "ordinances that provide for local street connectivity in the vicinity of the bypass facilities, including provisions for parallel streets and limits on interrupted street networks which cause reliance on the bypass facility for local trips." These requirements do not apply to the JTA phase, because the Oregon Legislature has already authorized funding for the JTA phase.

# **Oregon Transportation Plan**

The build alternatives and JTA phase would be consistent with the policies in the Oregon Transportation Plan.

# Oregon Highway Plan

#### **Build Alternatives**

The build alternatives would comply with all OHP policies, with one exception under the SD Alternative and two exceptions under the DI Alternative. As Table 3.2 6 shows, under the SD Alternative, the performance target under Policy 1F would not be met in 2035 at one intersection, OR 140 and existing OR 62. Under the DI Alternative, the performance targets would not be met at two intersections, the intersections of the I-5 southbound ramp with existing OR 62 and the intersection of OR 140 with existing OR 62. Under both build alternatives, the v/c ratios at the OR 140 intersection with existing OR 62 would be substantially lower than under the No Build Alternative. ODOT would have to approve exceptions to the targets for the instances where the targets are not met. The process for approving an exception requires justification of why meeting the target is not feasible.

#### JTA Phase

The JTA phase would comply with all OHP policies except that projected 2035 v/c ratios would exceed the applicable performance targets at the following intersections:

- I-5 southbound ramp with existing OR 62, as with the No Build Alternative
- Bypass with OR 62 at the northern terminus
- OR 140 with existing OR 62, but by substantially less than under the No Build Alternative
- Antelope Road with OR 62, as with the No Build Alternative
- Avenue G with OR 62, as with the No Build Alternative
- · Avenue H with OR 62, as with the No Build Alternative

ODOT would have to approve exceptions to the targets for the instances where the targets are not met. The process for approving an exception requires justification of why meeting the target is not feasible.

# Oregon Bicycle and Pedestrian Plan and ORS 366.514

The build alternatives and JTA phase would comply with ORS 366.514 and the policies of the Oregon Bicycle and Pedestrian Plan. ODOT plans to comply with the policies of the Oregon Bicycle and Pedestrian Plan by allowing bicycles and pedestrians on the shoulders of the bypass. New or rebuilt streets within the City of Medford would include bicycle lanes and sidewalks on both sides. In addition, under the JTA phase, the project would include a wide shoulder and a sidewalk on the east side of Crater Lake Avenue, where Crater Lake Avenue is extended to Gramercy Drive; sidewalks on the west side of OR 62 near the intersection with the bypass; and a crosswalk across OR 62 at the intersection.

## Regional Transportation Plan

The RTP includes a bypass like either of the build alternatives and the JTA phase.

## Jackson County Laws, Plans, and Policies

The Jackson County TSP does not include a bypass like either of the build alternatives or the JTA phase. For either of the build alternatives or the JTA phase to be compatible with the Jackson County Comprehensive Plan and TSP, the County would need to amend the County TSP and White City TSP to include a bypass like the build alternatives. As stated in the discussion of the Statewide Planning Program in Section 3.2.3.3, Jackson County would also have to approve exceptions to Statewide Planning Goals. As stated in Section 3.2.3.4, the requirements for Goal exceptions would allow issuance of exceptions for the JTA phase, regardless of design option. Approval of the TSP amendments and Statewide Planning Goal exceptions would result in the issuance of the land use permits Jackson County would need to issue pursuant to the Jackson County Current Land Development Ordinance (LDO). As stated in Section 3.2.3.4, it is premature at this time to say whether completion of a bypass to Dutton Road would meet the requirements for Goal exceptions in the future, when full funding for one of the building alternatives has been identified.

Prior to construction of either of the build alternatives or the JTA phase, Jackson County also would need to amend its TSP to include the Justice/Gregory connector road and classify the Justice/Gregory connector road as a Minor Collector, make other classification map changes necessitated by the bypass alignment and interchanges (and northern terminus intersection under the JTA phase), and add the project to the financially-constrained roadway improvement project list. Jackson County is considering these amendments in conjunction with its consideration of Goal exceptions for the JTA phase, as described above.

Because the Justice/Gregory connector road has been dropped from the JTA phase, Jackson County is no longer considering adding it to the Jackson County TSP.

The build alternatives would relocate a small parking area and game check station in the Denman Wildlife Area, which the Jackson County Comprehensive Plan designates for protection under Statewide Planning Goal 5. The LDO would not require Jackson County approval of the relocated parking area and check station, because the relocation is consistent with the management plan for the Denman Wildlife Area. For further details, see the Land Use and Planning Technical Report, which is available from the ODOT contact person identified on page i of this EIS.

# City of Medford Laws, Plans, and Policies

All of Subarea 1 is within the City of Medford. The JTA phase would be compatible with the Medford TSP. The TSP calls for a major arterial along the Medco Haul Road alignment, which the build alternatives would follow. A major arterial is the highest classification in the Medford TSP and the City considers the function of the proposed bypass to be close to the function of a major arterial. It is sufficient that state highway projects be compatible with local plans. The City of Medford is expected to amend the TSP in 2012 so that the build alternatives and JTA phase are consistent with the TSP. The build alternatives and JTA phase would be consistent with other applicable provisions of the TSP.

The TSP update that is intended to include amendments to make the JTA phase consistent with the TSP is still under development. The City of Medford aims to complete the update by the end of 2013.

ODOT would not need to obtain a permit from the City before building either of the build alternatives or the JTA phase. However, a build alternative or the JTA phase would have to be designed to comply with the height restrictions in the City of Medford's Airport Approach and Airport Radar overlay zones. These include a 40-foot height limit on anything constructed in the Airport Radar overlay zones, which would include the interchange between the bypass and Vilas Road and the bypass between Vilas Road and Coker Butte Road. A build alternative also would

have to comply with the restrictions of the Airport Approach Zone on the height of light standards and other improvements. These restrictions would apply to parts of the bypass, itself, near the airport and to project improvements to Vilas Road. The build alternatives and JTA phase have been developed so that both project improvements and vehicles using them would be lower than these height restrictions.

# 3.2.4 Avoidance, Minimization, and Mitigation Measures

This subsection addresses avoidance, minimization, and mitigation measures proposed to address the direct, indirect, and temporary impacts of the proposed project on land use.

# 3.2.4.1 Direct Impacts

As stated in Section 3.2.3.1, the SD Alternative would use about 3.7 acres of land in the Bear Creek Greenway. This impact could be further reduced by use of a retaining wall instead of a fill slope.

# 3.2.4.2 Indirect Impacts, Including Impacts on Farmlands

The following potential mitigation measures have been identified. All would apply under both the build alternatives and the JTA phase to the land zoned EFU and OSR in Subarea 2 and would mitigate impacts described in Section 3.2.3.2.

- While neither Design Option A nor Design Option B is the ODOT recommended alternative, if either design option were selected, ODOT would work with the owner of the Sims property to identify feasible measures to mitigate the impact of the bypass on use of the property for horse boarding and training.
- Under all design options, where the bypass would cross EFU land, the bypass could be
  designed to avoid impairing soil drainage, such as by inclusion of drainage trenches or
  culverts, where needed and appropriate.
- Under all design options, on land zoned EFU, access to the perimeter of the bypass for maintenance and inspection could be on easements to minimize the amount of land converted to roadway use and enable use of the easement land for field access by the land's owners or renters. The same could be done for the Justice/Gregory connector road.

# 3.2.5 Avoidance, Minimization, and/or Mitigation Commitments Incorporated into the Preferred Alternative

ODOT makes the following commitments.

#### **JTA Phase**

- ODOT will secure the completion of land use actions prior to construction of the JTA phase located north of the Medford Urban Growth Boundary, to comply with the Statewide Planning Program.
- Where the bypass will cross EFU land, ODOT will design the bypass to avoid impairing soil drainage, including installation of drainage trenches or culverts where practical and appropriate.

# JTA Phase and Preferred Alternative Subsequent to Construction of the JTA Phase

There are no mitigation commitments applicable to both the JTA phase and the Preferred Alternative.

# Preferred Alternative Subsequent to Construction of the JTA Phase

 ODOT will secure the completion of necessary land use actions prior to construction of the remaining phase or phases of the Preferred Alternative, to comply with the Statewide Planning Program.

#### **Section 3.3 Content**

- 3.3.1 Regulatory Setting
- 3.3.2 Affected Environment
- 3.3.3 Environmental Consequences
  - 3.3.3.1 Right-of-Way Impacts
  - 3.3.3.2 Potential Displacements
  - 3.3.3.3 Utility Impacts
- 3.3.4 Avoidance, Minimization, and/or Mitigation Measures
  - 3.3.4.1 Residential and Business Relocations
- 3.3.5 Avoidance, Minimization, and/or Mitigation Commitments Incorporated Into the Preferred Alternative

# 3.3

# 3.3 Right-of-Way and Utilities

# 3.3.1 Regulatory Setting

In cooperation with the FHWA, the ODOT Right-of-Way Section implements Public Law 91-646, the Uniform Relocation Assistance and Real Properties Acquisition Policies Act of 1970, as amended (Uniform Act). The Uniform Act ensures the fair and equitable relocation and reestablishment of persons, businesses, farms and nonprofit organizations displaced as a result of federal or federally assisted programs. The objective of the Uniform Act is to ensure that persons displaced as a direct result of federal or federally-assisted projects are treated fairly and consistently, and equitably so that such displaced persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole. The ODOT Right-of-Way Section and its Region Right-of-Way offices through its Relocation Assistance Program assure compliance with the Uniform Act and Federal rules and regulations. Please see Appendix D for a summary of ODOT's relocation process.

Relocation policies and procedures under the administration of ODOT shall be non-discriminatory in accordance with Title VI of the Civil Rights Act of 1964, which states: "Section 601: No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal Financial Assistance." Please see Appendix C for a copy of ODOT's Title VI Policy Statement.

# 3.3.2 Affected Environment

The project would acquire property throughout the project area that is currently in use for residences or businesses. The primary residential area consists of rural residential properties between the Medford UGB and the White City UUCB. A rural residential neighborhood, referred to as the Peace/Justice neighborhood is located west of existing OR 62 in the vicinity of Justice Road and Peace Lane. In addition, much of the land between Vilas Road and the White City UUCB is used for agriculture with rural residential dwellings. There are also residential properties dispersed within the commercial areas along existing OR 62. These residential areas are illustrated in the existing land use map, Figure 3.2-2.

Business areas, including commercial and industrial uses, are found primarily along existing OR 62. The OR 62/I-5 interchange area is a primary commercial district for the Medford area, with a range of businesses from "big box stores" to small strip malls and other businesses. Additional commercial properties are located along Vilas Road to the west of existing OR 62 and along existing OR 62 between the Medford UGB and the White City UUCB. Industrial properties are concentrated primarily within the White City UUCB west of existing OR 62. Commercial farms are located to the west of existing OR 62, in the vicinity of East Gregory Road. Section 3.5, Socioeconomic Analysis, provides additional detail on residential and business areas within the project area.

For further information regarding right-of-way, including citations to source documents, refer to the OR 62 Corridor Solutions Project Right-of-Way Technical Report, December 2011 and Right-of-Way Technical Report Addendum, March 2013. These reports are available from the ODOT contact person identified on page i of this EIS.

For further information regarding utilities, including citations to source documents, refer to the *OR 62 Corridor Solutions Project Utilities Technical Memo*, November 2009. This report is available from the ODOT contact person identified on page i of this EIS.

There are a number of utility providers with facilities within the project area, as described in Table 3.3-1. Relocation of utilities affects the costs of the project and must be considered carefully to ensure continuation of service during construction.

**Table 3.3-1 Utilities Located Within the Project Area** 

Owner	Туре	Facilities
Avista Corp.	Natural Gas	Gas mains, gas lines
Charter Communications	Communications/Cable TV	Overhead cable and fiber optic lines
City of Medford	Sewer/Storm Drain Facilities	Pumping Stations, sewer lines, underground storm drains, treatment ponds, discharge outfalls
Embarq	Communications/Fiber Optics	Overhead cable and fiber optic lines
Hunter Communications	Communications/Fiber Optics	Overhead and underground fiber optic lines
Medford Water Commission	Water	Underground water lines
Pacific Power and Light (PP&L)	Electric	Overhead power lines and power poles
Qwest	Communications	Overhead and underground fiber optic and copper lines
Rogue River Valley Irrigation District	Irrigation Water	Irrigation canal
Rogue Valley Sewer Services	Sanitary Sewer	Pumping stations, sewer lines

Source: Utilities Technical Memo

# 3.3.3 Environmental Consequences

# 3.3.3.1 Right-of-Way Impacts

Right-of-way impacts are based on information that is available at this time and may change as the project further develops and when the project completes final design.

The SD Alternative and DI Alternative would both require right-of-way acquisition. Table 3.3-2 provides a summary of the right-of-way impacts for the two build alternatives. As shown in the table, the build alternatives would impact between 224 and 274 parcels, requiring property acquisition of between approximately 248 acres and 268 acres. The DI Alternative would impact approximately 38 more parcels than the SD Alternative. However, the SD Alternative would require approximately 12 more acres of property acquisition than the DI Alternative.

Design Option B would impact the most parcels and Design Option C would impact the fewest parcels. Design Option B would impact approximately five more parcels than Design Option A and approximately 12 more parcels than Design Option C. Design Options A and C would require a similar amount of property acquisition. Design Option B would require approximately eight more acres of property acquisition than either Design Option A or C.

The design refinements that have occurred for the FEIS have resulted in five fewer parcels impacted by the Preferred Alternative, SD Option C, requiring acquisition of approximately 18 fewer acres of property. Table 3.3-2 provides a summary of the right-of-way impacts for the Preferred Alternative.

Table 3.3-3 provides a summary of right-of-way impacts for the JTA phase. As shown in the table, the JTA phase would impact between 76 and 85 parcels, requiring property acquisition of between approximately 130 acres and 134 acres. Design Options A and B would each impact approximately 85 parcels and require approximately 134 acres of property acquisition. Design Option C would impact the fewest parcels, approximately nine fewer than either Design Option A or B, and require the least property acquisition, approximately four acres less than either Design Option A or B.

The design refinements that have occurred for the FEIS have resulted in 18 fewer parcels impacted by the JTA phase, requiring acquisition of approximately 23 fewer acres of property. Table 3.3-3 provides a summary of the right-of-way impacts for the JTA phase.

Table 3.3-2 Summary of Estimated Right-of-Way Impacts of the Build Alternatives

	SD Alternative			DI Alternative			
			Design Option				
	Design Option A	<b>Design Option</b> B	(Preferred Alternative)	Design Option A	<b>Design Option</b> B	Design Option C	
Number of Impacted Parcels	231	236	224 219	269	274	262	
Number of Impacted Ownerships	136	140	133 130	175	179	172	
Right-of-Way Purchase Area (acres) <sup>1</sup>	260.38	268.42	260.02 242.3	248.66	256.70	248.29	
Uneconomic Remainders (acres) <sup>2</sup>	NA	NA	NA 74.7	NA	NA	NA	
Total Acres of Affected Parcels <sup>3</sup>	2,461.23	2,477.61	2,414.62 2,152.6	2,817.98	2,834.37	2,771.37	
Number of Residential Tenants Displaced	11	12	13 10	36	36	37	
Number of Residential Owners Displaced <sup>4</sup>	8	8	8	9	9	9	
Number of Businesses Displaced	40	51	40 34	46	57	46	

<sup>&</sup>lt;sup>1</sup>Land required for the project. Does not include uneconomic remainders.

Table 3.3-3 Summary of Estimated Right-of-Way Impacts of the JTA Phase

	JTA Phase					
	Design Option A	Design Option B	Design Option C (Preferred Alternative)			
Number of Impacted Parcels	85	85	76 58			
Number of Impacted Ownerships	52	52	47 36			
Right-of-Way Purchase Area (acres) <sup>1</sup>	133.99	133.70	129.63 106.3			
Uneconomic Remainders (acres) <sup>2</sup>	NA	NA	NA 20.7			
Total Acres of Affected Parcels <sup>3</sup>	1,036.79	1,045.73	987.08 698.5			
Number of Residential Tenants Displaced	5	5	4 0			
Number of Residential Owners Displaced <sup>2</sup>	6	6	7 4			
Number of Businesses Displaced	10	14	10 5			

<sup>&</sup>lt;sup>1</sup>Land required for the project. Does not include uneconomic remainders.

<sup>&</sup>lt;sup>2</sup>Uneconomic remainders refers to the remaining portions of purchased parcels that are not required for the project but cannot be resold because they are too small or inaccessible. The calculations included in the DEIS were incorrect and have been replaced in the FEIS with NA, Not Available. Only the calculation for the Preferred Alternative, SD Design Option C, was calculated for the FEIS.

<sup>&</sup>lt;sup>3</sup>The total acreage of the affected parcels, including land required for the project, land that can be resold, and uneconomic remainders.

<sup>&#</sup>x27;No interviews with property owners have been conducted. For the purposes of this report, ownership displacements were assumed for those properties for which the owner's address listed in the Jackson County Assessor's database is the same as the impacted site address.

<sup>&</sup>lt;sup>2</sup>Uneconomic remainders refers to the remaining portions of purchased parcels that are not required for the project but cannot be resold because they are too small or inaccessible. The calculations included in the DEIS were incorrect and have been replaced in the FEIS with NA, Not Available. Only the calculation for the Preferred Alternative, SD Design Option C, was calculated for the FEIS.

<sup>&</sup>lt;sup>3</sup>The total acreage of the affected parcels, including land required for the project, land that can be resold, and uneconomic remainders.

<sup>4</sup>No interviews with property owners have been conducted. For the purposes of this report, ownership displacements were assumed for those properties for which the owner's address listed in the Jackson County Assessor's database is the same as the impacted site address.

As described in Sections 3.12.4.1, 3.13.4.4, and 3.13.4.5, ODOT will mitigate for the impacts of the Preferred Alternative on wetlands and associated endangered species at the Kincaid Property Mitigation Site shown in Figure 3.12-9. This will result in acquisition of an additional four parcels and 116 acres.

# 3.3.3.2 Potential Displacements

Figures 3.3-1 through 3.3-12c show all potentially impacted parcels and potential residential and business displacements with each alternative and design option. Tables 3.3-2 and 3.3-3 also summarize potential residential and business displacements.

# **Potential Residential Displacements**

#### **Build Alternatives**

As shown in Table 3.3-2, the build alternatives would result in between 19 and 46 residential displacements. The DI Alternative would result in approximately 25 more residential displacements than the SD Alternative. This difference would be due to the displacement of six four-plexes and one single family home in the vicinity of Hilton Road and Corona Avenue with the DI Alternative. This is shown on Figure 3.3-3b.

Other residential displacements would be common to both build alternatives. Residential displacements would occur with either build alternative where the bypass would cross Vilas Road (shown in Figure 3.3-4), Justice Road (shown in Figures 3.3-5a, b, and c), at the intersection of OR 62 and Agate Road (shown in Figures 3.3-6a, b, and c), and on Dutton Road west of existing OR 62 (shown in Figure 3.3-8).

Additional residential displacements would occur with the build alternatives due to landlocking. This means that the build alternatives would result in the permanent closure of a property's driveway, making it inaccessible. In these cases, the property would be purchased as part of the project and considered a displacement. With either build alternative, four residences along the east side of OR 62, north of Dutton Road would be landlocked and, therefore, displaced. These are shown in Figure 3.3-8.

An additional property, located west of existing OR 62 between Justice Road and Gregory Road (referred to as the Sims' property), is currently approached via a flag lot driveway from OR 62. Design Options A and B would close this driveway, landlocking this property. Design Option C would not close this driveway and, therefore, would not landlock this property. This property is shown on Figures 3.3-6a, b, and c.

The design refinements that have occurred for the FEIS have resulted in three fewer residential displacements with the Preferred Alternative. Table 3.3-2 provides a summary of the residential displacement impacts for the Preferred Alternative.

#### **JTA Phase**

As shown in Table 3.3-3, the JTA phase would result in approximately 11 residential displacements. These would be located where the bypass would cross Vilas Road (shown in Figure 3.3-10), Justice Road (shown in Figures 3.3-11a, b, and c), and at the intersection of OR 62 and Agate Road (shown in Figures 3.3-12a, b, and c). As with the build alternatives, the Sims' property would be landlocked by Design Options A and B, but not by Design Option C.

Figure 3.3-1

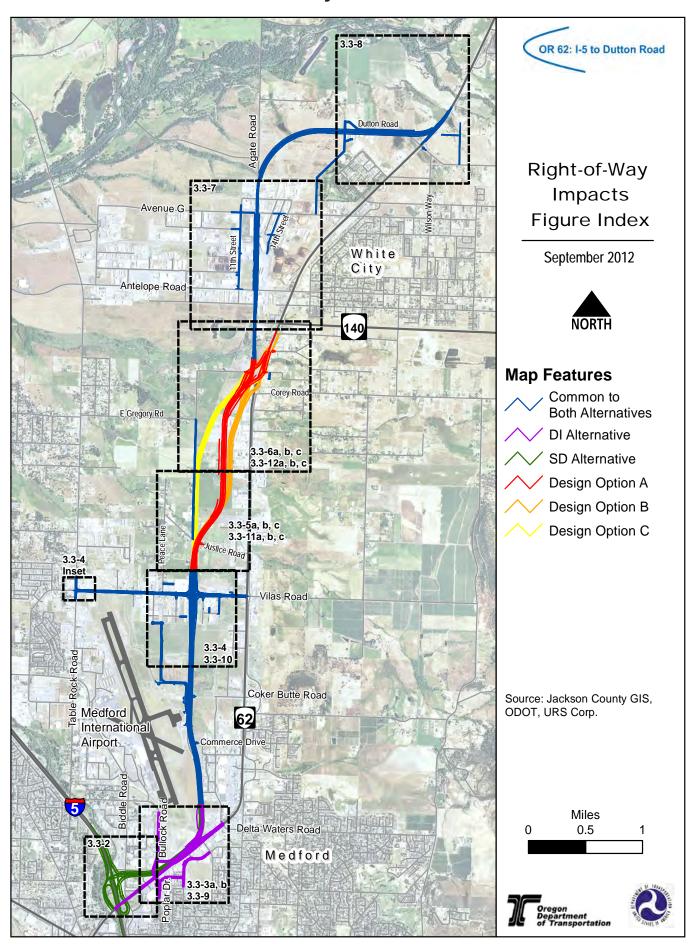
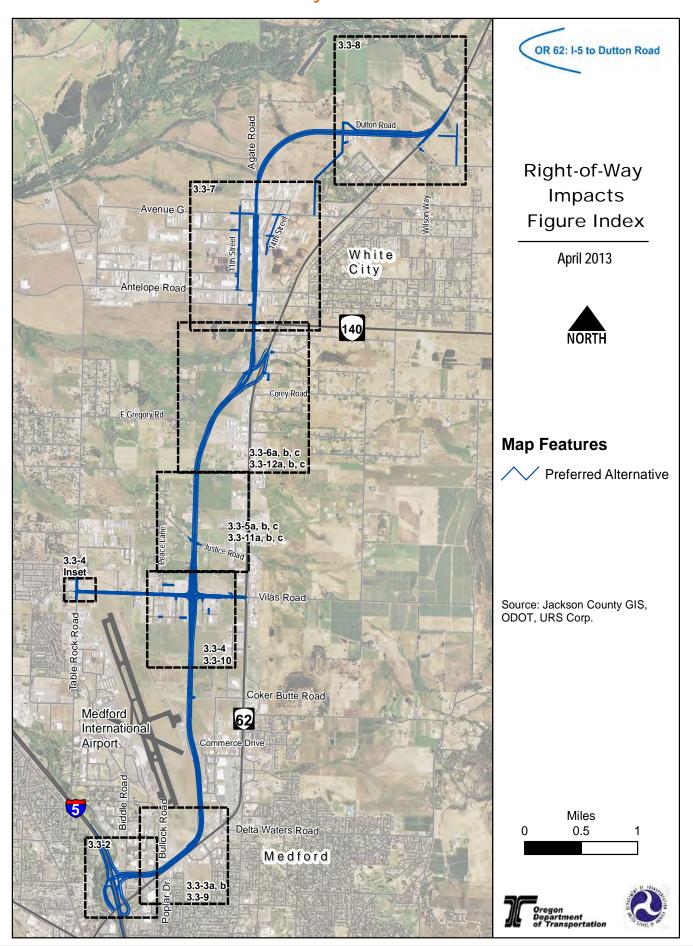


Figure 3.3-1 FEIS



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Figure 3.3-2

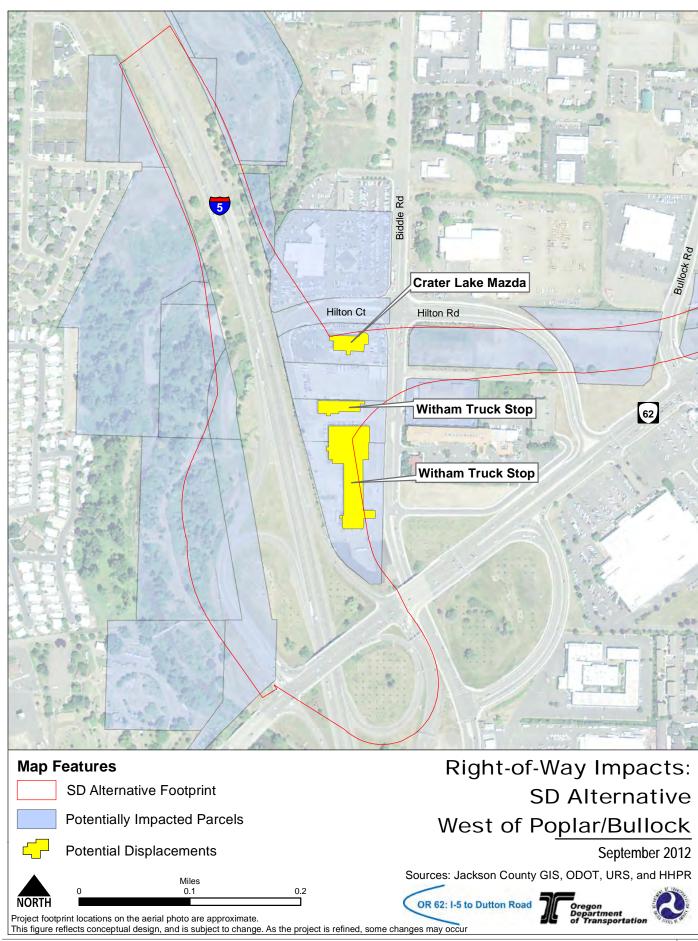


Figure 3.3-3a

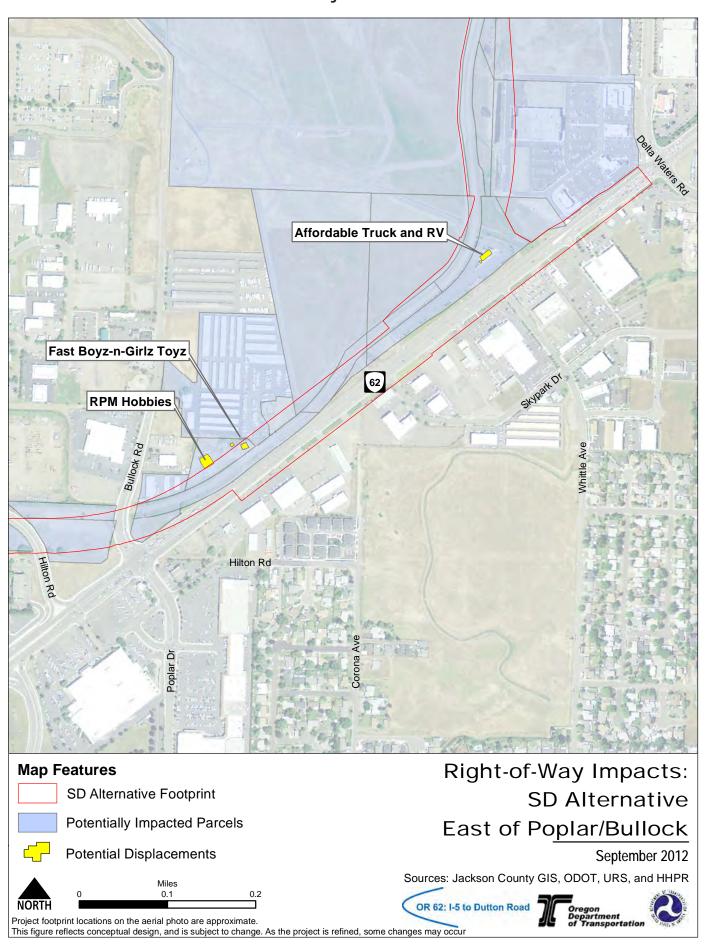


Figure 3.3-3a FEIS



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Figure 3.3-3b

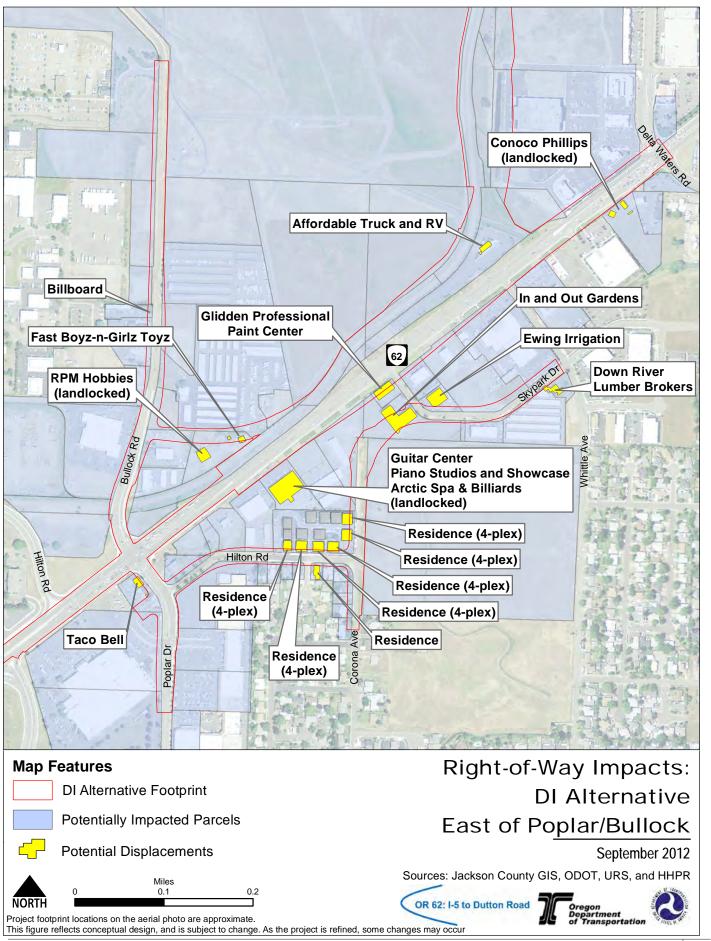


Figure 3.3-4

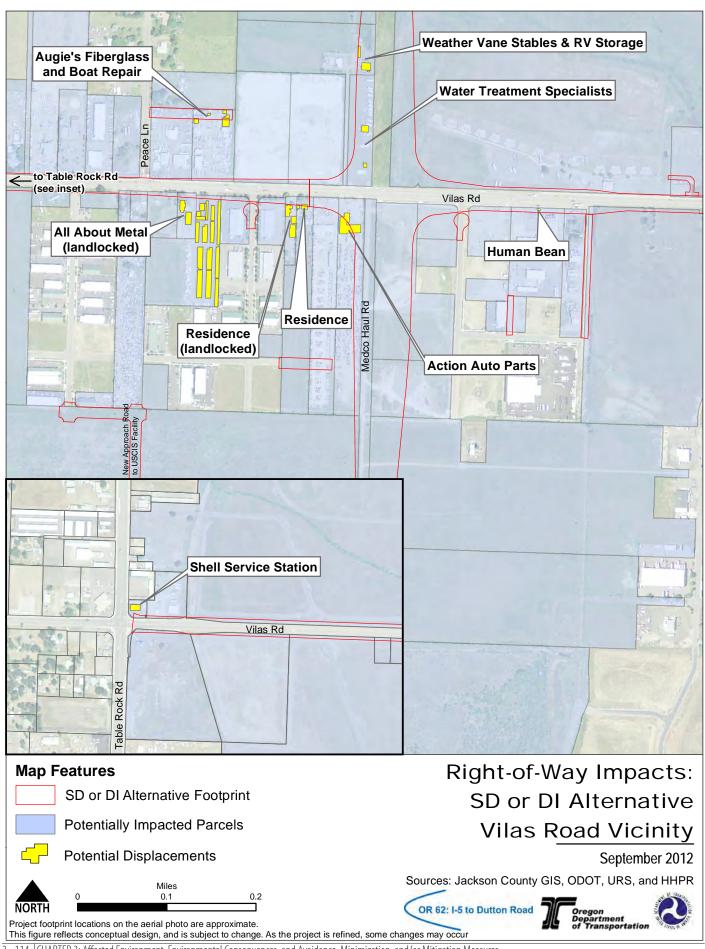


Figure 3.3-4 FEIS

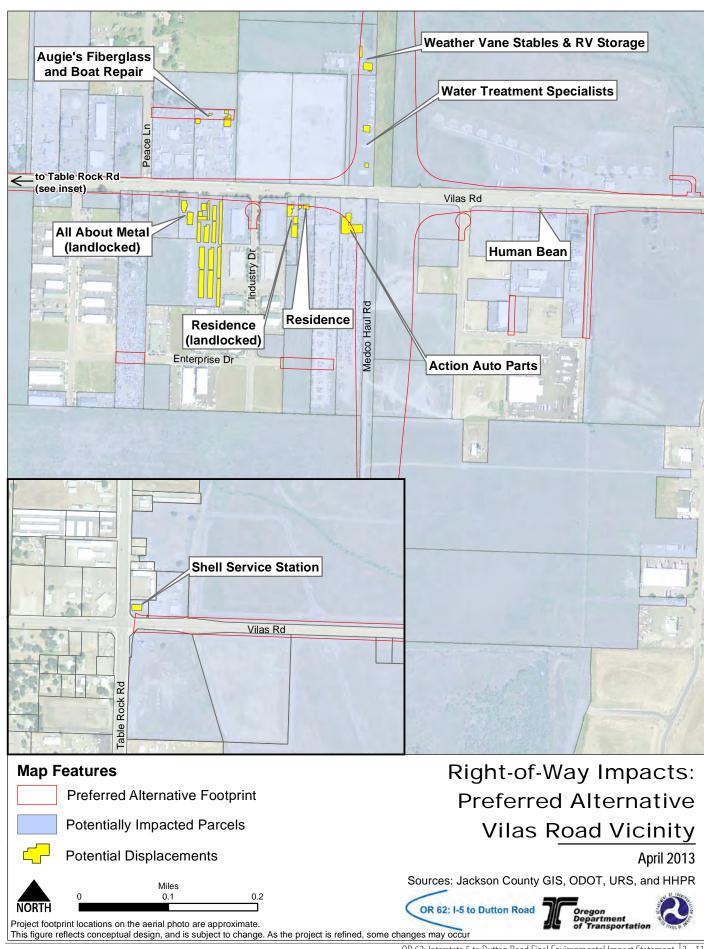
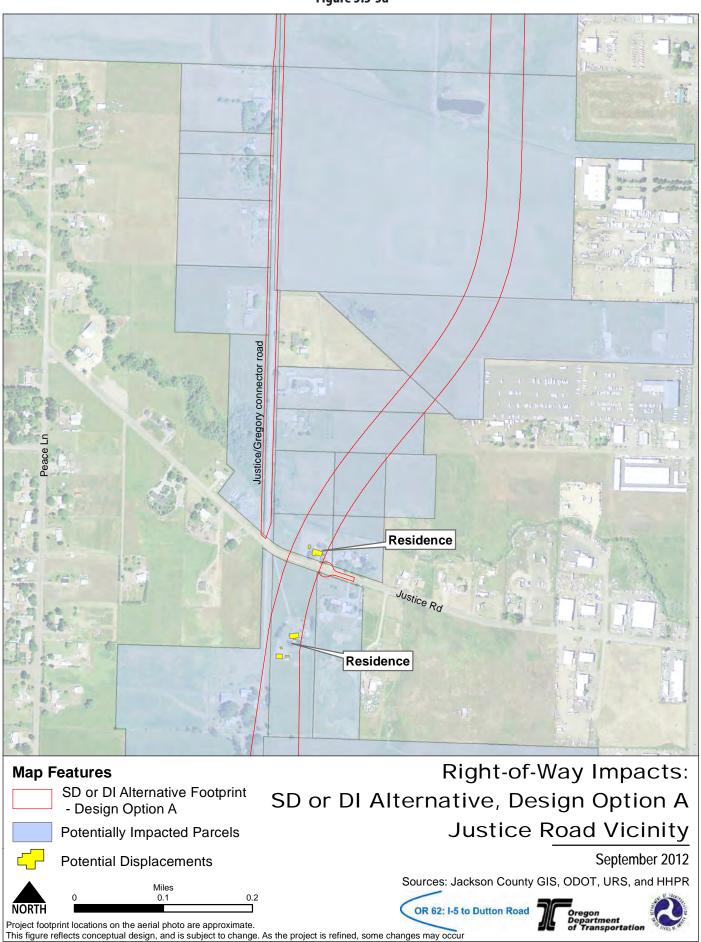


Figure 3.3-5a



This figure reflects conceptual design, and is subject to change. As the project is refined, some changes may occur

Project footprint locations on the aerial photo are approximate.

Figure 3.3-5b

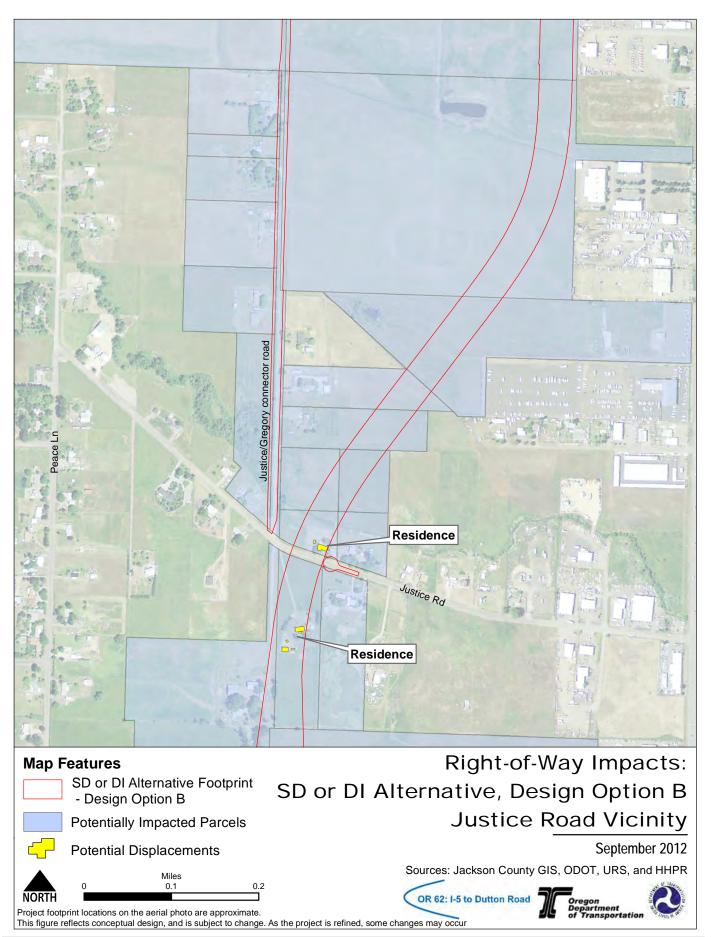
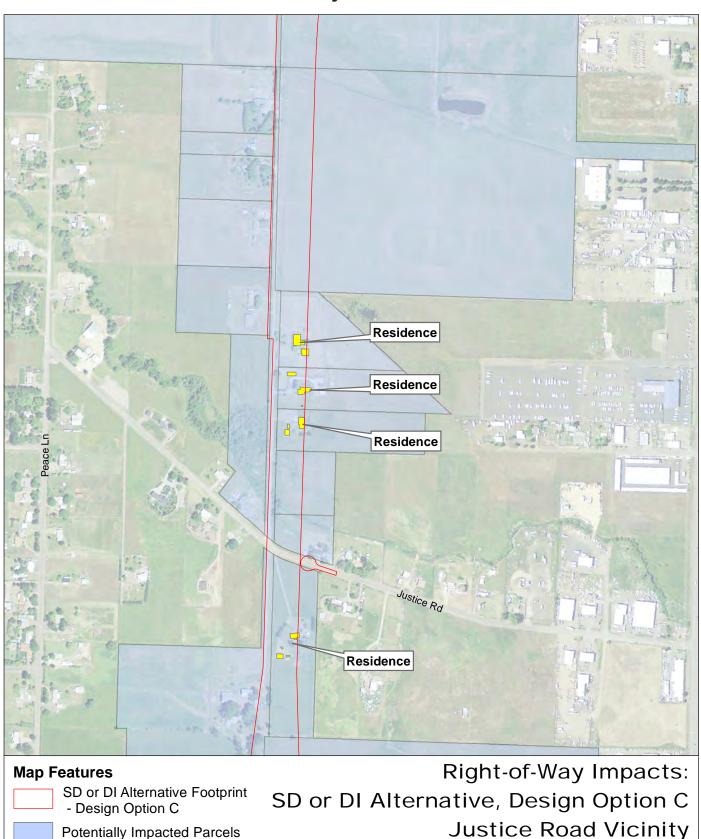


Figure 3.3-5c



Potential Displacements

Miles

**Justice Road Vicinity** 

September 2012

Sources: Jackson County GIS, ODOT, URS, and HHPR

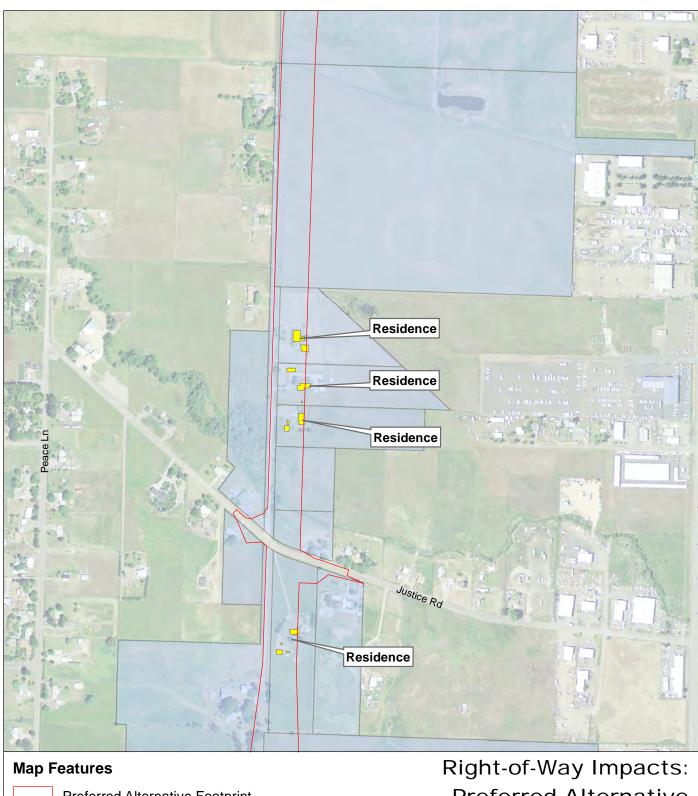






Project footprint locations on the aerial photo are approximate. This figure reflects conceptual design, and is subject to change. As the project is refined, some changes may occur

Figure 3.3-5c FEIS



Preferred Alternative Footprint

Potentially Impacted Parcels

Potential Displacements

Miles

Project footprint locations on the aerial photo are approximate. This figure reflects conceptual design, and is subject to change. As the project is refined, some changes may occur

**Preferred Alternative Justice Road Vicinity** 

April 2013

Sources: Jackson County GIS, ODOT, URS, and HHPR







Figure 3.3-6a

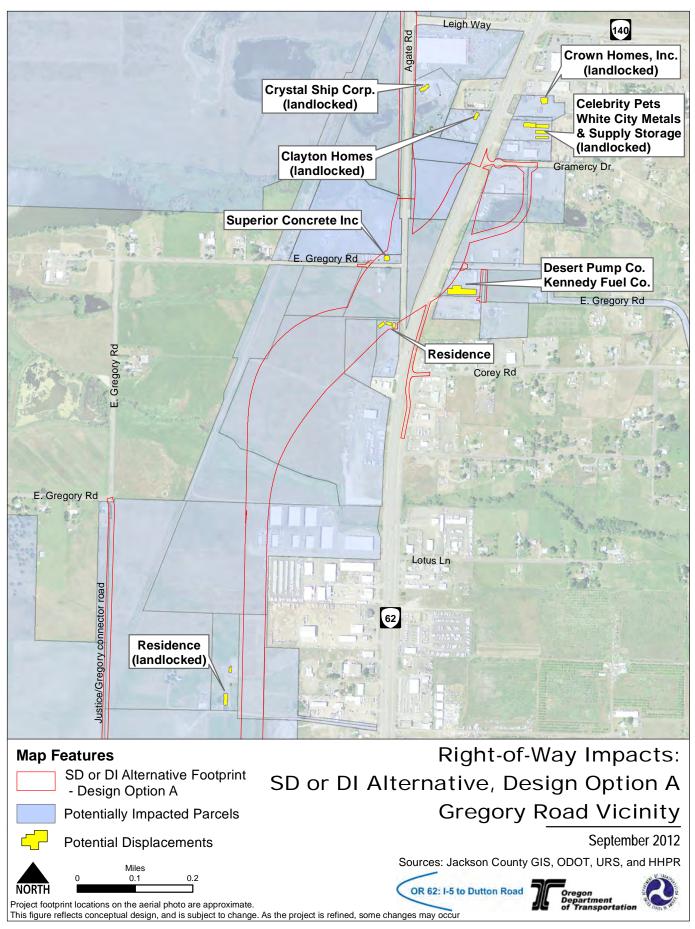


Figure 3.3-6b

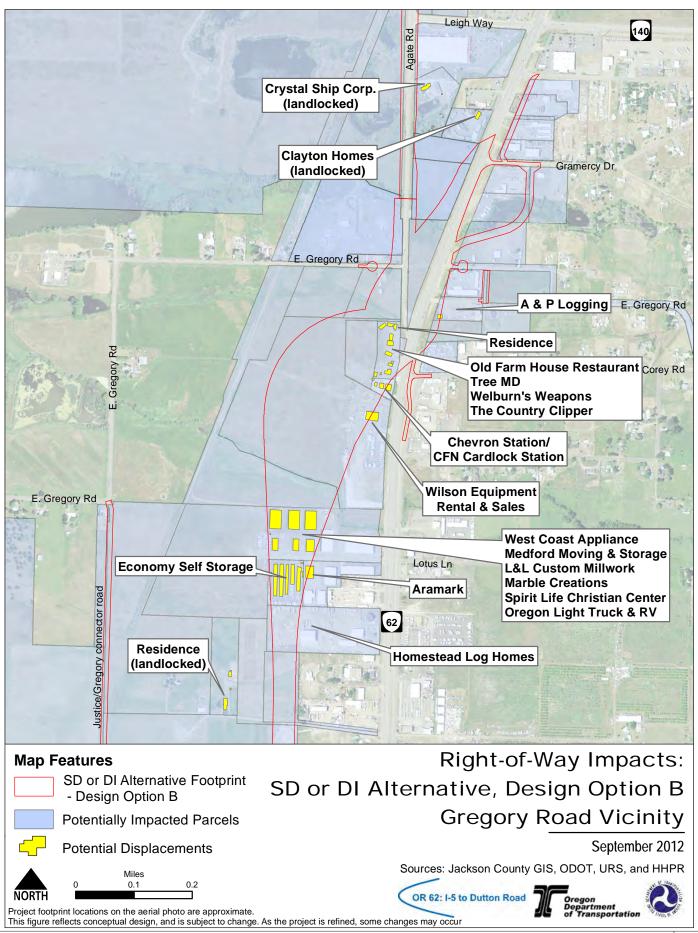


Figure 3.3-6c

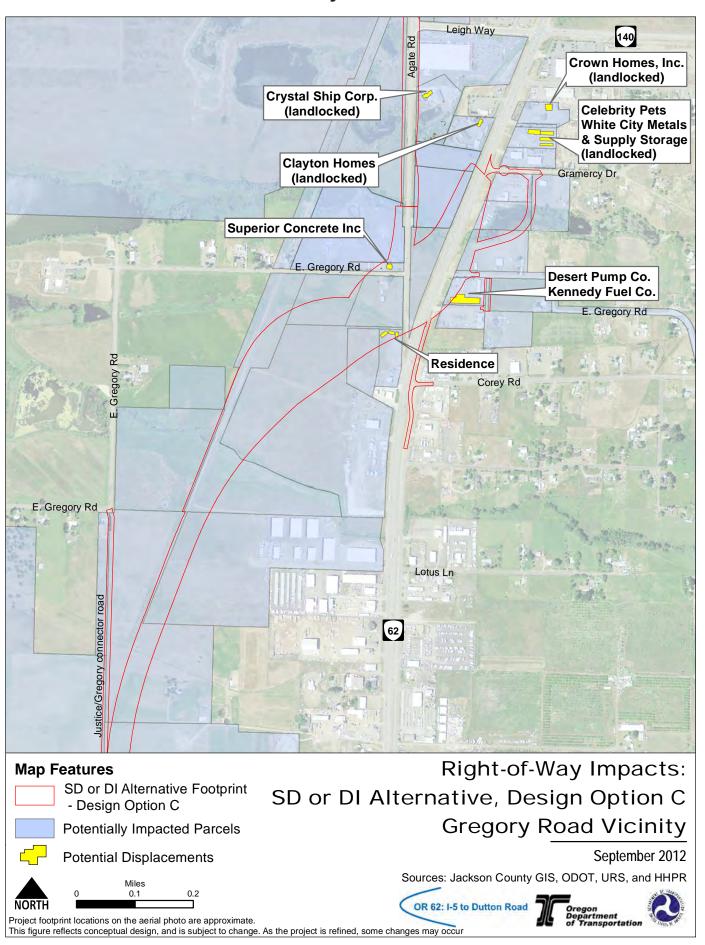
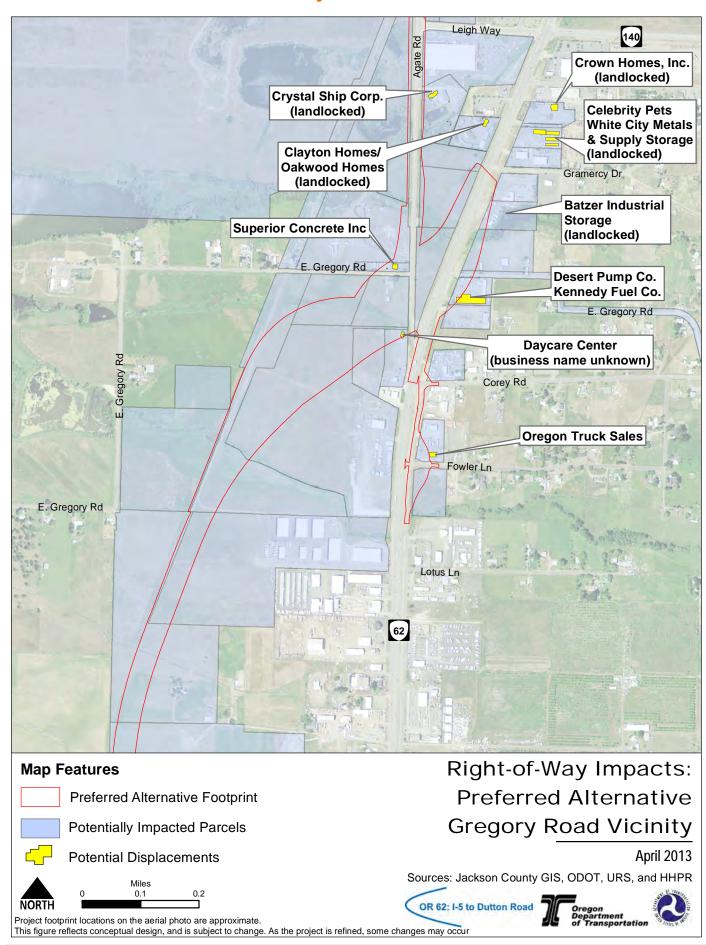
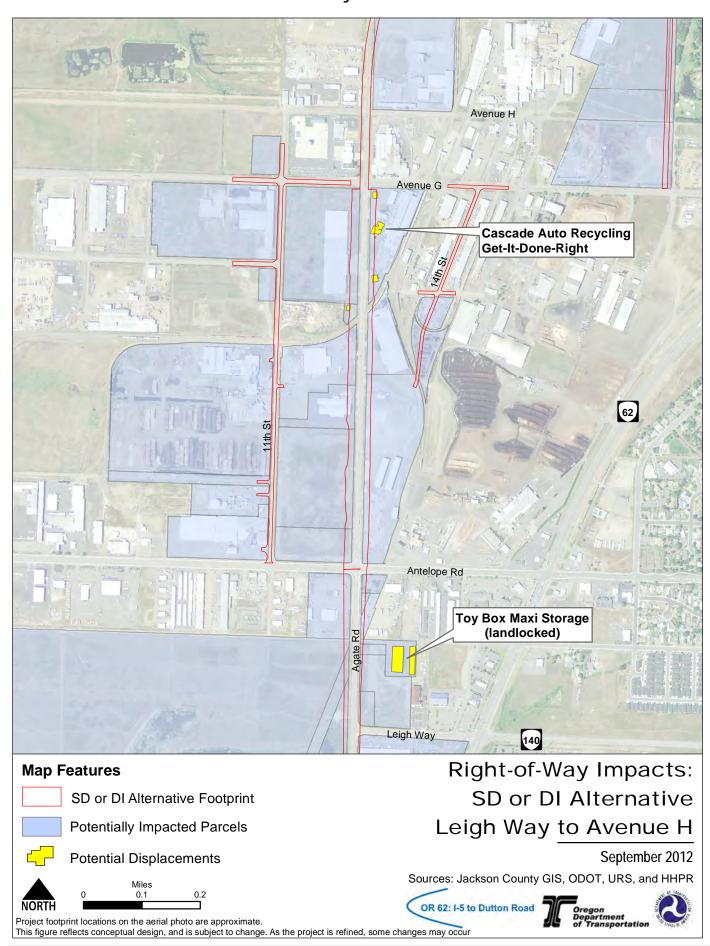


Figure 3.3-6c FEIS



This page is left blank intentionally to match a new figure for the FEIS (on the right) with the corresponding figure from the DEIS (on the left).

**Figure 3.3-7** 



**Figure 3.3-8** 

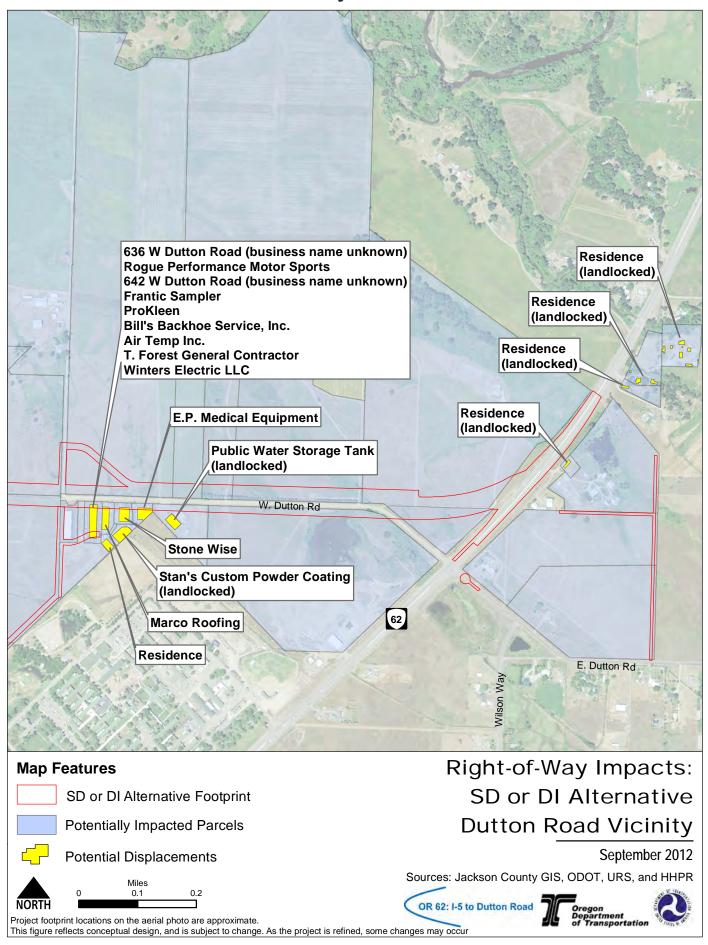
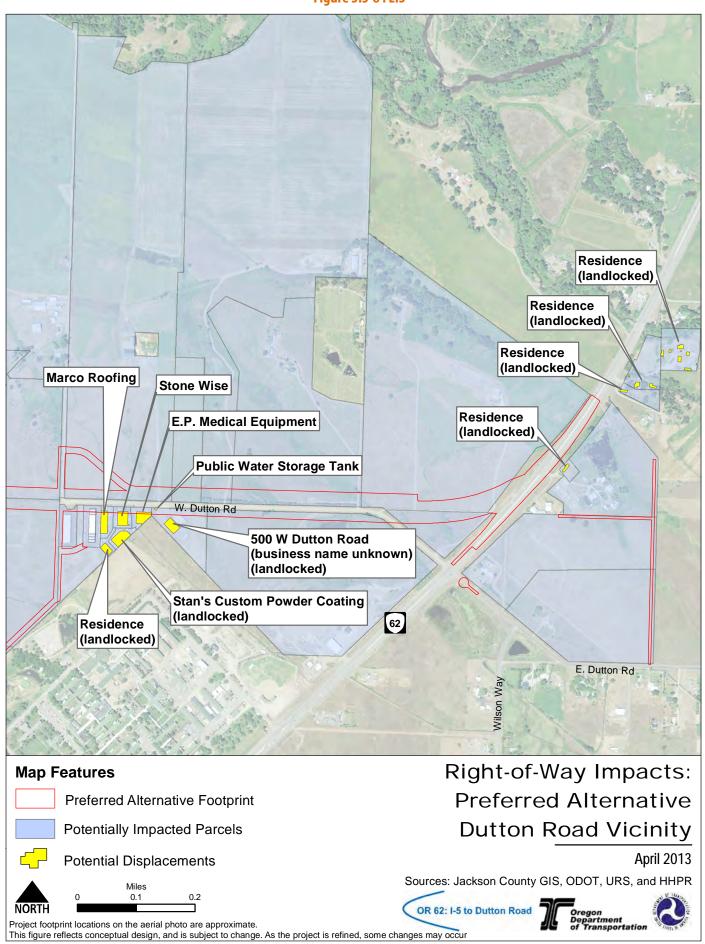


Figure 3.3-8 FEIS



**Figure 3.3-9** 

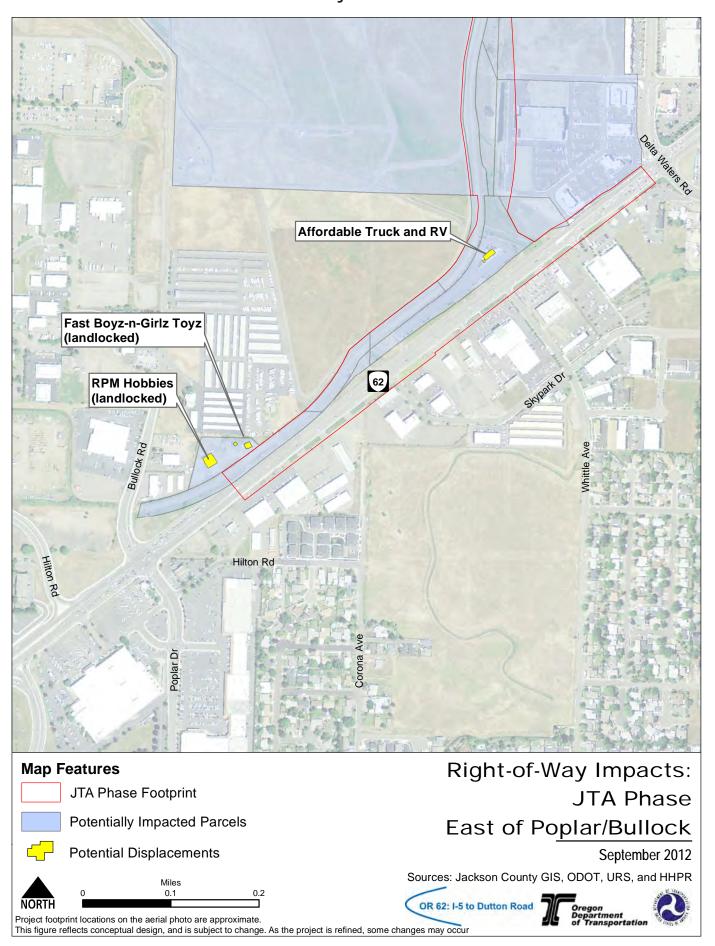
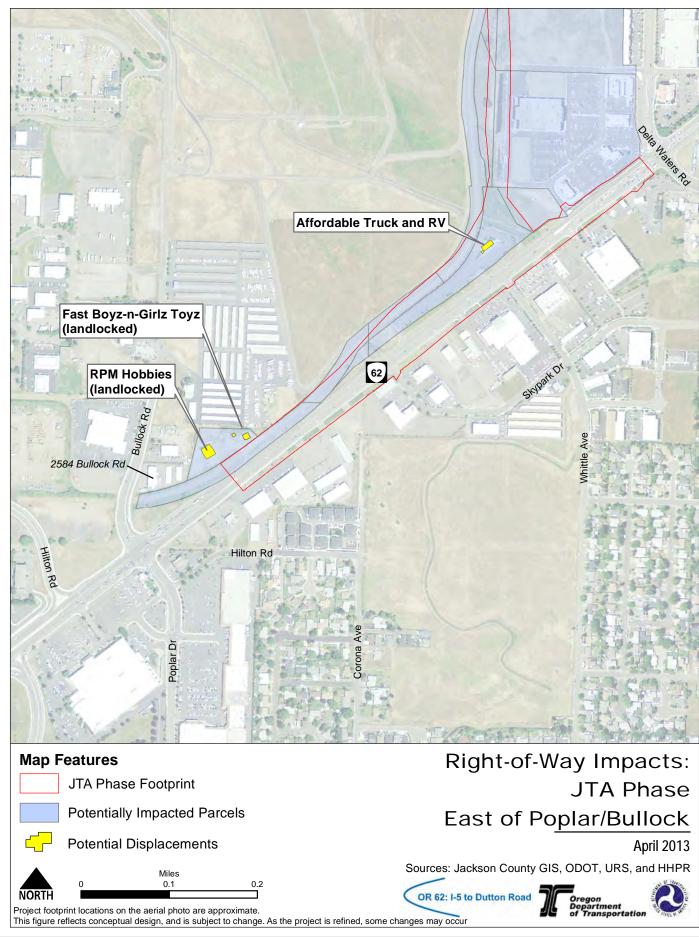


Figure 3.3-9 FEIS



**Figure 3.3-10** 

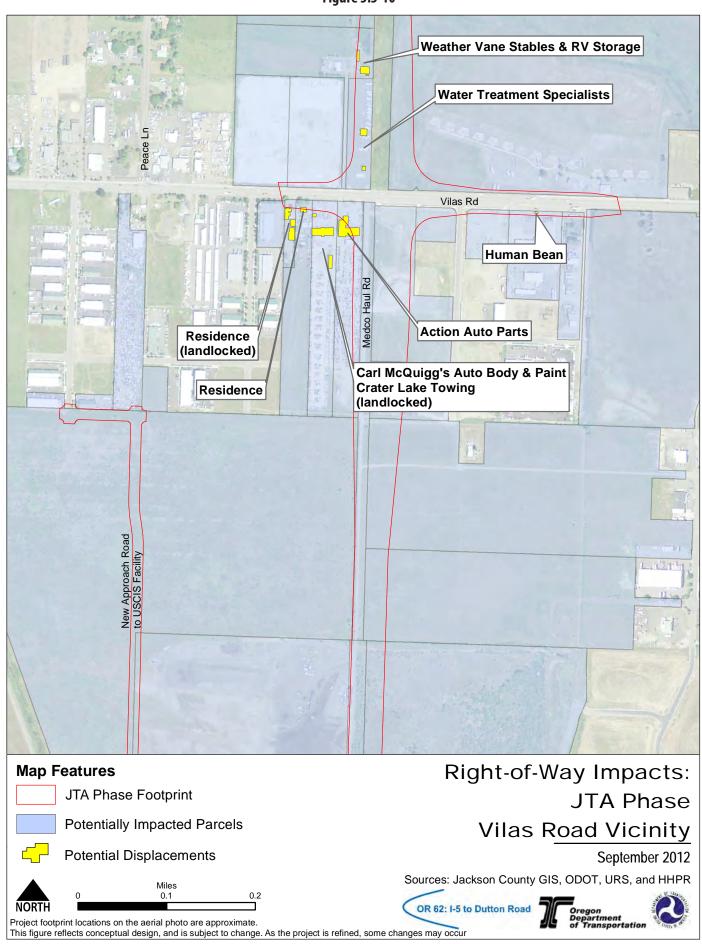
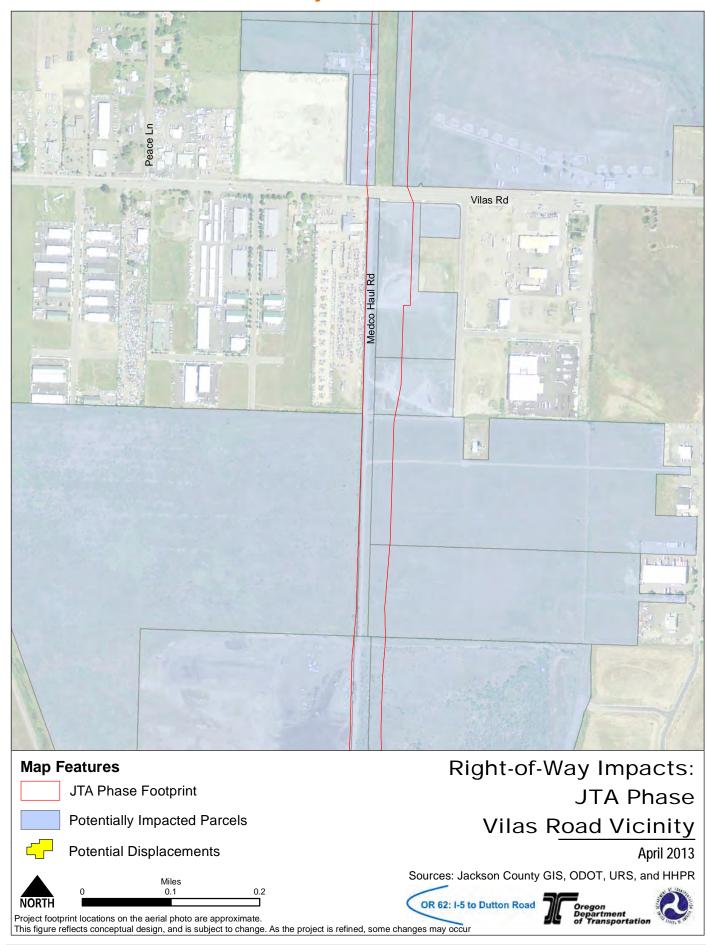
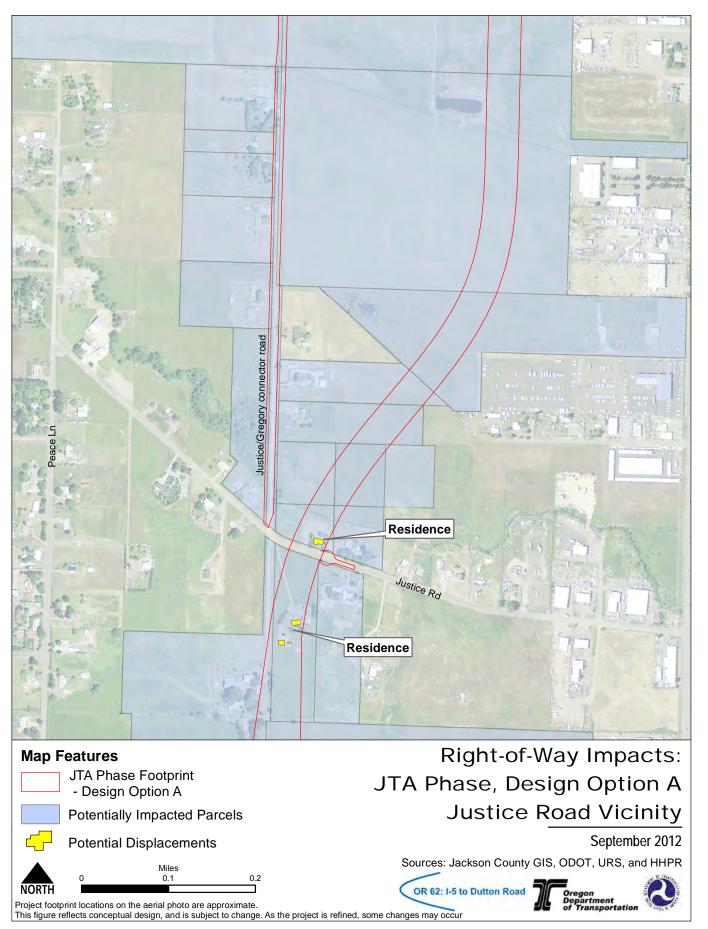


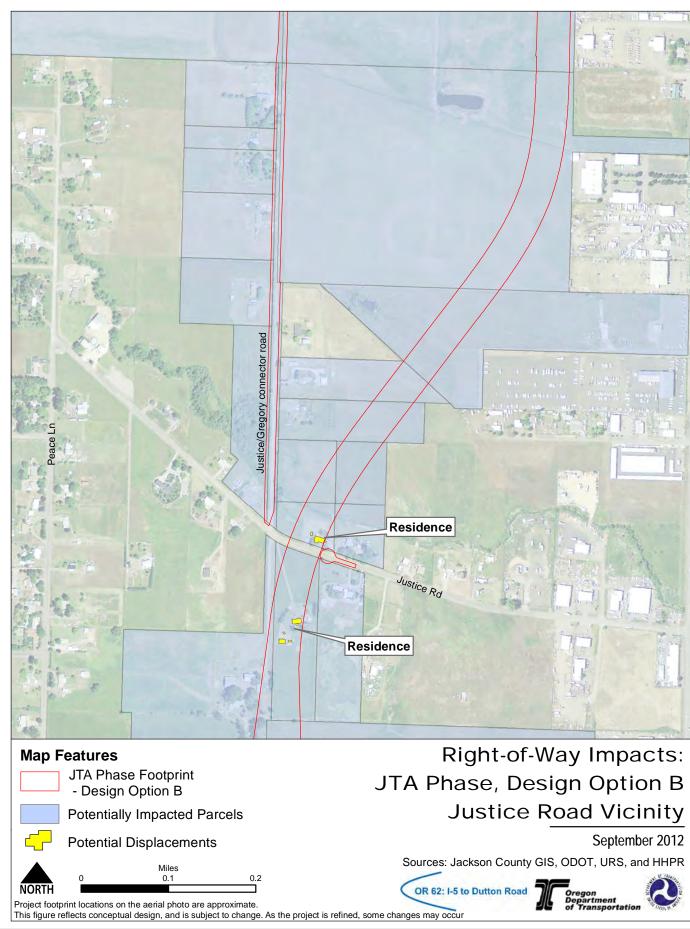
Figure 3.3-10 FEIS



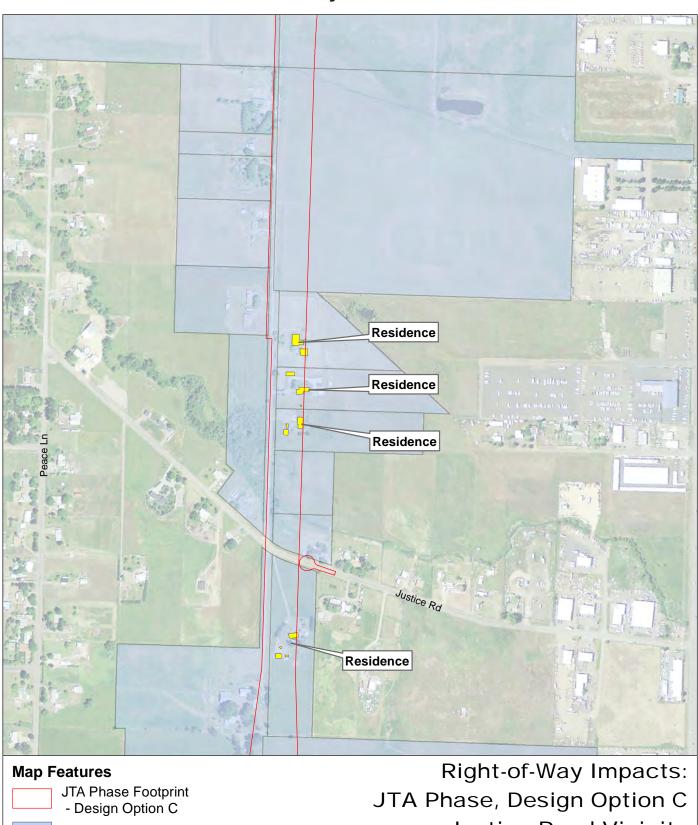
**Figure 3.3-11a** 

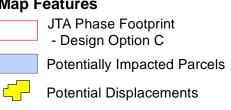


**Figure 3.3-11b** 



**Figure 3.3-11c** 





**Justice Road Vicinity** 

September 2012

Sources: Jackson County GIS, ODOT, URS, and HHPR

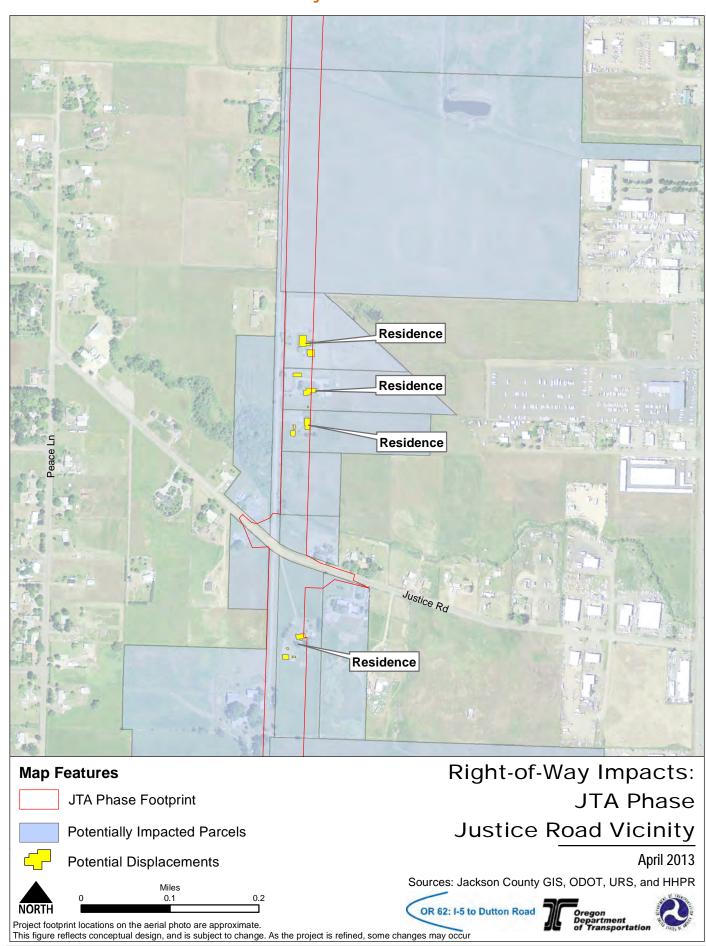




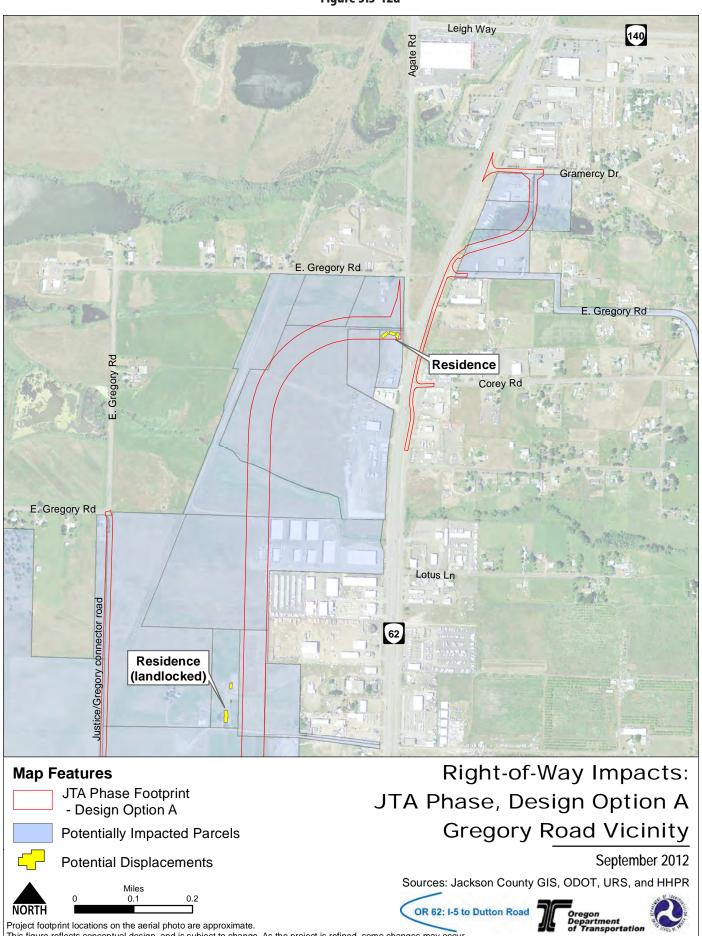


Project footprint locations on the aerial photo are approximate. This figure reflects conceptual design, and is subject to change. As the project is refined, some changes may occur

Figure 3.3-11c FEIS



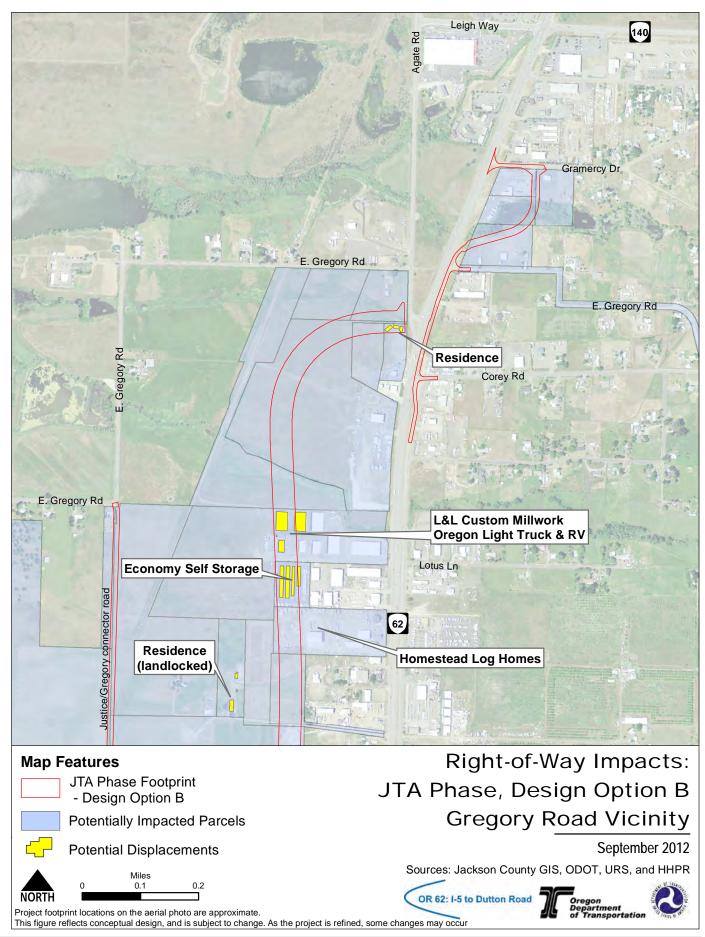
**Figure 3.3-12a** 



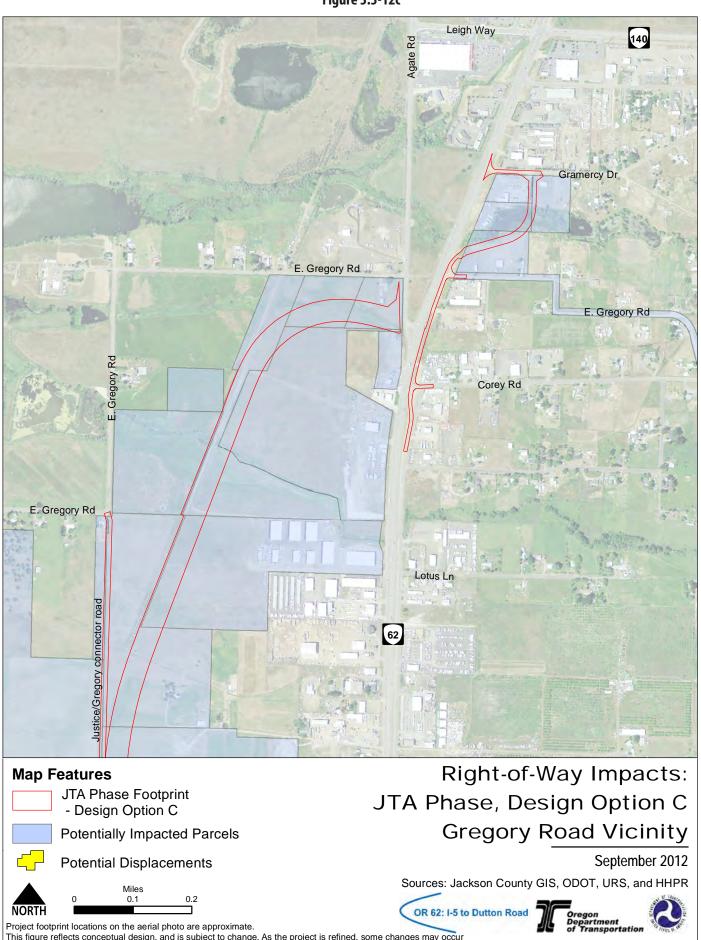
This figure reflects conceptual design, and is subject to change. As the project is refined, some changes may occur

Project footprint locations on the aerial photo are approximate.

**Figure 3.3-12b** 



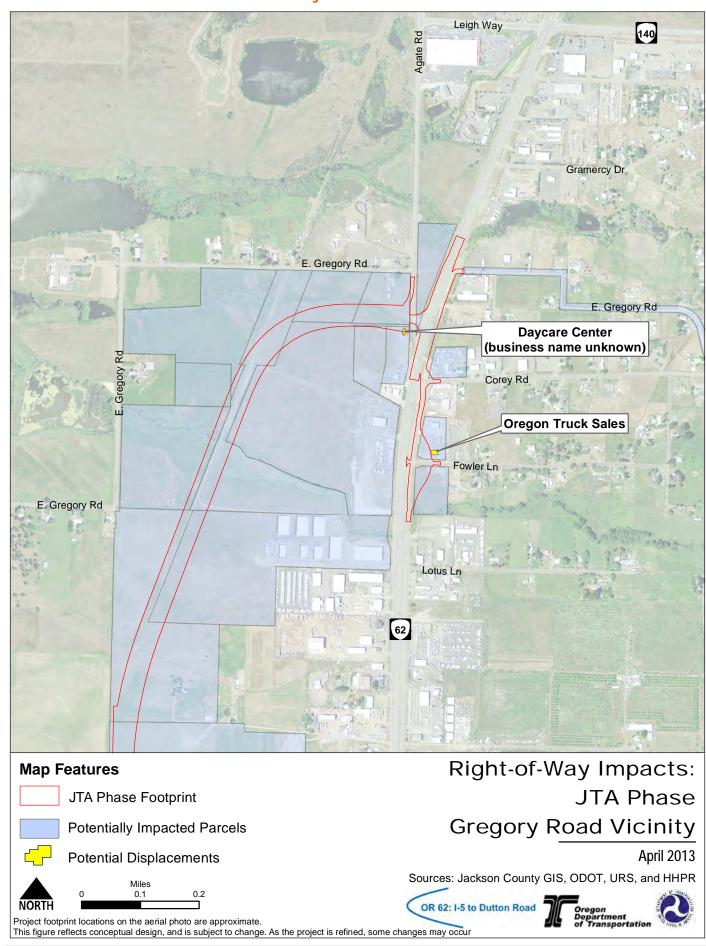
**Figure 3.3-12c** 



Project footprint locations on the aerial photo are approximate.

This figure reflects conceptual design, and is subject to change. As the project is refined, some changes may occur

Figure 3.3-12c FEIS



The design refinements that have occurred for the FEIS have resulted in seven fewer residential displacements with the JTA phase Table 3.3-3 provides a summary of the residential displacement impacts for the JTA phase.

### **Market for Residential Relocation**

### **Residential Rental Market**

The rental range for the residential tenant displacees is estimated at \$400 to \$1,200 per month. In this range, VacancyNet.com indicates there are 1,500 residential homes and over 200 available apartments for rent in the greater Medford area, which includes White City, Central Point, and Eagle Point. Based on the information available there should not be a problem in relocating any displacee, if they are paying something near market rent.

The residential rental market was reexamined in 2013 prior to publication of the FEIS. The rental range for residential tenant displacees is still estimated at \$400 to \$1,200 per month. According to Zillow.com, there are approximately 85 residential homes and 60 available apartments for rent in the greater Medford area, including White City, Central Point, and Eagle Point. While this is a reduction from the earlier data collected in 2010, it still indicates that there should not be a problem in relocating any displacee if they are paying something near market rent.

## **Residential Real Estate Market**

In reviewing the housing market in the Medford area, it was found that there are over 900 residential properties listed for sale as of July 2010. These are summarized in Table 3.3-4.

The housing market was reexamined in 2013 prior to publication of the FEIS. There were approximately 285 residential properties listed for sale as of March 2013. These are summarized in Table 3.3-4.

The following information was taken from the Medford Area Multiple Listing Service:

Table 3.3-4 Partial Available Listings (July 2010, Updated March 2013)

Price Range	East Medford	White City	Central Point	Eagle Point	West Medford
\$40k - \$100k	8 11	11 6	8 2	7 1	42 11
\$101k - \$150k	46 15	30 5	41 8	14 3	77 8
\$151k - \$200k	66 13	16 6	35 11	22 7	52 11
\$201k - \$250k	77 18	2	33 13	19 5	35 2
\$251k - \$300k	56 23	0 1	23 9	20 9	19 1
\$301k - \$350k	44 12	0 2	6 11	15 5	10 0
\$351k - \$400k	28 14	0 2	8 7	5 4	6 1
\$401k - \$450k	10 6	0 1	4 3	3 4	0
\$451k - \$500k	11 7	0	2	6 6	4 0

In addition, the Medford Area Multiple Listing Service reports that there are 480 listings for undeveloped residential lots of 0.07 acres to 10.0 acres, priced from \$30,000 to \$400,000.

For the 2013 update, the Medford Area Multiple Listing Service reports that there are 171 listings for undeveloped residential lots of 0.09 acres to 9.6 acres, priced from \$40,000 to \$530,000.

Based on the information available from VacancyNet.com and Multiple Listing Service for the Medford area, there is adequate replacement housing in the price range of the tenants and owners being displaced including the low-end of the rent scale and the housing market.

The reexamination of the residential real estate and rental market for the Medford area prior to the publication of the FEIS, using Zillow.com and the Multiple Listing Service shows that the market has tightened since 2010, but supports the same conclusion that there is adequate replacement housing for any displacee.

# **Potential Business Displacements**

## **Build Alternatives**

As shown in Table 3.3-2, the build alternatives would result in between 40 and 57 business displacements. The DI Alternative would result in approximately six more business displacements than the SD Alternative. These are located in the vicinity of the southern terminus and shown in Figures 3.3-2, 3.3-3a, and 3.3-3b.

Design Option B would result in approximately 11 more business displacements than either Design Option A or C. These additional displacements would occur along the west side of OR 62 between Justice Road and Gregory Road. This is shown in Figures 3.3-6a, b, and c.

Other areas where business displacements would occur with either build alternative include Vilas Road between existing OR 62 and Table Rock Road (shown in Figure 3.3-4), the vicinity of the intersection of OR 62 and Agate Road (shown in Figures 3.3-6a, b, and c), along Agate Road through White City (shown in Figure 3.3-7), and along Dutton Road, west of OR 62 (shown in Figure 3.3-8).

The design refinements that have occurred for the FEIS have resulted in six fewer business displacements with the Preferred Alternative. Table 3.3-2 provides a summary of the business displacement impacts for the Preferred Alternative.

#### JTA Phase

As shown in Table 3.3-3, the JTA phase would result in between 10 and 14 business displacements. Design Option B would result in approximately four more business displacements than Design Option A or C. These additional displacements would occur along the west side of OR 62 between Justice Road and Gregory Road. This is shown in Figures 3.3-12a, b, and c.

Other areas where business displacements would occur with the JTA phase include the vicinity of the southern terminus (shown in Figure 3.3-9) and where the bypass would cross Vilas Road (shown in Figure 3.3-10).

The design refinements that have occurred for the FEIS have resulted in five fewer business displacements with the JTA phase. Table 3.3-3 provides a summary of the business displacement impacts for the JTA phase.

Table 3.3-5 provides a list of businesses that could be displaced by the project. The table indicates which alternative and design option would result in displacement of each business.

Due to the design refinements for the FEIS and mitigation measures to respond to public comments, there are changes to potential business displacements with the Preferred Alternative. Table 3.3-5 FEIS provides a list of businesses that will be displaced by the Preferred Alternative and the JTA phase.

In the area of Agate Road and existing OR 62, one additional business will be displaced by the Preferred Alternative due to being landlocked, as a result of the removal of the extension of Crater Lake Avenue to Gramercy Drive. This business is Batzer Industrial Storage, located at 6988 Crater Lake Highway. A daycare center located at 6781 Crater Lake Highway will be displaced by the Preferred Alternative and the JTA phase. This was identified as a residential displacement in the DEIS, but the property's use has changed since the publication of the DEIS. Oregon Truck Sales, located at 6700 Crater Lake Highway will be displaced due to the realignment of Crater Lake Avenue at Fowler Lane, which is a design change in the Preferred Alternative and the JTA phase that occurred since the publication of the DEIS.

In the area of West Dutton Road, the Preferred Alternative will include mitigation measures that will realign the proposed Dutton Road overcrossing and the proposed local approach road to 636 to 658 West Dutton Road. As a result, the nine businesses located at 636 to 658 West Dutton Road, which were identified as potential business displacements in the DEIS, will not be displaced with the Preferred Alternative.

**Table 3.3-5 Potential Business Displacements** 

		SI	SD Alternative		DI Alternative			JTA Phase		
Address	Business Name	"X" indi	"X" indicates a business that is d			d by an a	alternat	ive or de	sign op	tion
- Audi Goo	Sasiness Hume	Α	В	C	A	В	С	Α	В	C
6804 Agate Rd.	Crystal Ship Corp	Х	Х	χ	Х	Х	Х			
7126 Agate Rd.	Toy Box Maxi-Storage	Х	Х	χ	Х	Х	Х			
8250 Agate Rd.	Cascade Auto Recycling	Х	Х	Х	Х	Χ	Х			
8250 Agate Rd.	Get-It-Done-Right	Х	Х	χ	Х	Х	Х			
2517 Biddle Rd.	Crater Lake Mazda	Х	Х	χ						
2343 Biddle Rd.	Witham Parts & Equipment Co.	Х	Х	χ						
2821 Bullock Rd.	Billboard				Х	Χ	Х			
2720 Crater Lake Ave.	Glidden Professional Paint Center				Х	Χ	Х			
2570 Crater Lake Hwy.	Guitar Center				Х	Χ	Х			
2580 Crater Lake Hwy.	Piano Studios and Showcase				Х	Х	Х			
2590 Crater Lake Hwy.	Arctic Spa & Billiards				Х	Χ	Х			
2490 Crater Lake Hwy.	Taco Bell				Х	Х	Х			
2625 Crater Lake Hwy.	RPM Hobbies	Х	Х	χ	Х	Х	Х	Χ	Х	χ
2625 Crater Lake Hwy.	Pristine Auto Detailing	Х	Х	Х	Х	Х	Х	Х	Х	Χ
2625 Crater Lake Hwy.	Motorcycle Ship							Χ	Х	Χ
2665 Crater Lake Hwy.	Fast Boyz-n-Girlz Toyz	Х	Х	χ	Х	Х	Х			
2805 Crater Lake Hwy.	Affordable Truck & RV	Х	χ	χ	Х	Χ	Х	Χ	Х	Х
2805 Crater Lake Hwy.	Crater Lake Motor Sales	Х	Х	χ	Х	Х	Х	Х	Х	χ
3000 Crater Lake Hwy.	Conoco Phillips Station				Х	Х	Х			
6301 Crater Lake Hwy.	Homestead Log Homes		Х			Х			Х	
6433 Crater Lake Hwy.	Aramark		Х			Χ				
6439 Crater Lake Hwy.	West Coast Appliance		Х			Х				
6453 Crater Lake Hwy.	Economy Self Storage		Х			Χ			Х	
6461 Crater Lake Hwy.	Medford Moving & Storage		Х			Х				
6471 Crater Lake Hwy.	L & L Custom Millwork.		χ			Χ			Х	
6473 Crater Lake Hwy.	Marble Creations		Х			Х				
6475 Crater Lake Hwy.	Spirit Life Christian Center		Х			Χ				
6477 Crater Lake Hwy.	Oregon Light Truck & RV		Х			Χ			Х	
6731 Crater Lake Hwy.	Wilson Equipment Rental & Sales		χ			Χ				
6781 Crater Lake Hwy.	Old Farm House Restaurant		Х			Χ				
6783 Crater Lake Hwy.	Tree MD		χ			Χ				
6785 Crater Lake Hwy.	Welburn's Weapons		Х			Χ				
6787 Crater Lake Hwy.	The Country Clipper		Х			Χ				
6841 Crater Lake Hwy.	A&P Logging, Inc.		Х			Χ				
6779 Crater Lake Hwy.	Chevron		Х			Χ				
6779 Crater Lake Hwy.	CFN Cardlock Station		Х			Х				
6868 Crater Lake Hwy.	Desert Pump Co.	Х		χ	Х		Χ			
6868 Crater Lake Hwy.	Kennedy Fuel Co.	Х		Χ	Х		Х			
6988 Crater Lake Hwy.	Clayton/Oakwood Homes			χ						

		SD Alternative			DI Alternative			JTA Phase		
Address	Business Name	"X" indicates a business that is displaced by an alternative or design option								
		Α	В	C	Α	В	C	Α	В	C
7162 Crater Lake Hwy.	Celebrity Pets	Х		Х	Х		Х			
7162 Crater Lake Hwy.	White City Metals & Supply Storage	Х		Х	Χ		Х			
7191 Crater Lake Hwy.	Clayton Homes/Oakwood Homes	Х	Χ	Х	Х	Х	Х			
7220 Crater Lake Hwy.	Crown Homes, Inc.	Х		Х	Х		Х			
500 W Dutton Rd.	Public water storage tank	Х	Х	Х	Χ	Х	Х			
540 W Dutton Rd.	E.P. Medical Equipment	Х	Х	Χ	Χ	Χ	Х			
550 W Dutton Rd.	Stone Wise	Х	Χ	Χ	Х	Χ	Х			
580 W Dutton Rd.	Stan's Custom Powder Coating	Х	Х	Х	Χ	Х	Х			
600 W Dutton Rd.	Marco Roofing	Х	Χ	Χ	Χ	Χ	Х			
636 W Dutton Rd.	(Occupied)	Х	Х	Х	Χ	Χ	Х			
638 W Dutton Rd.	Rogue Performance Motor Sports	Х	Х	Х	Х	Χ	Х			
642 W Dutton Rd.	(Occupied)	Х	Χ	Х	Х	Χ	Х			
644 W Dutton Rd.	Frantic Sampler	Х	Χ	Х	Х	Х	Х			
646 W Dutton Rd.	ProKleen	Х	Χ	Х	Х	Χ	Х			
652 W Dutton Rd.	Bill's Backhoe Service, Inc.	Х	Χ	Х	Х	Х	Х			
654 W Dutton Rd.	Air Temp Inc.	Х	Χ	Х	Х	Χ	Х			
656 W Dutton Rd.	T. Forest General Contractor	Х	χ	Х	χ	Х	Х			
658 W Dutton Rd.	Winters Electric LLC	Х	Х	Х	Χ	Χ	Х			
1955 E Gregory Rd.	Superior Concrete Inc.	Х		χ	Χ		Х			
1574 Sky Park Dr.	In & Out Gardens				Х	Χ	Х			
1575 Sky Park Dr.	Ewing Irrigation				χ	Х	Х			
5020 Table Rock Rd.	Shell Service Station	Х	Χ	Х	Х	Χ	Х			
779 E Vilas Rd.	Augie's Fiberglass and Boat Repair	Х	Χ	Х	χ	Х	Х			
802 E Vilas Rd.	All About Metal	Х	Х	Х	Χ	Χ	Х			
954 E Vilas Rd.	Carl McQuigg's Auto Body & Paint							Х	Х	Χ
954 E Vilas Rd.	Crater Lake Towing							Χ	Х	χ
984 E Vilas Rd.	Action U-Pull-It	Х	Х	χ	Χ	Х	Х	Х	Х	Χ
984 E Vilas Rd.	Action Auto Parts	Х	Х	χ	Χ	Χ	Χ	Χ	Х	Χ
1104 E Vilas Rd.	Human Bean	Х	χ	χ	χ	Х	Χ	Χ	Х	Χ
965 E Vilas Rd.	Weather Vane Stables & RV Storage	Х	Х	χ	Χ	Χ	Χ	Х	Х	Χ
965 E Vilas Rd.	Water Treatment Specialists	Х	Х	χ	χ	Х	Х	Х	Х	Χ
2625 Whittle Ave.	Down River Lumber Brokers				Х	Χ	Х			

**Table 3.3-5 FEIS Potential Business Displacements** 

Address	Busîness Name	"X" indicates a business that is displaced by an alternative or design option					
		Preferred Alternative	JTA Phase				
2517 Biddle Rd.	Crater Lake Mazda	Х					
2343 Biddle Rd.	Witham Parts & Equipment Co.	Х					
2625 Crater Lake Hwy.	RPM Hobbies	Х	Х				
2665 Crater Lake Hwy.	Fast Boyz-n-Girlz Toyz	Х	Х				
2805 Crater Lake Hwy.	Affordable Truck & RV	Х	Х				
779 E Vilas Rd.	Augie's Fiberglass and Boat Repair	Х					
802 E Vilas Rd.	All About Metal	Х					
956 E Vilas Rd.	Action U-Pull-It	Х					
984 E Vilas Rd.	Action Auto Parts	Х					
965 E Vilas Rd.	Weather Vane Stables & RV Storage	Х					
965 E Vilas Rd.	Water Treatment Specialists	Х					
1104 E Vilas Rd.	Human Bean	Х					
5020 Table Rock Rd.	Shell Service Station	Х					
1955 E Gregory Rd.	Superior Concrete Inc.	X					
6781 Crater Lake Hwy.	Daycare center (business name not available)	X	Х				
6868 Crater Lake Hwy.	Desert Pump Co.	Х					
6868 Crater Lake Hwy.	Kennedy Fuel Co.	Х					
6988 Crater Lake Hwy.	Batzer Industrial Storage	X					
7162 Crater Lake Hwy.	Celebrity Pets	X					
7130 Crater Lake Hwy.	White City Metals & Supply Storage	X					
7191 Crater Lake Hwy.	Clayton Homes/Oakwood Homes	Х					
7220 Crater Lake Hwy.	Crown Homes, Inc.	X					
6700 Crater Lake Hwy.	Oregon Truck Sales	X	Х				
6804 Agate Rd.	Crystal Ship Corp	Х					
7126 Agate Rd.	Toy Box Maxi-Storage	X					
8250 Agate Rd.	Cascade Auto Recycling	X					
8250 Agate Rd.	Get-It-Done-Right	X					
500 W Dutton Rd.	Business name unknown	X					
500 W Dutton Rd.	Public water storage tank	X					
540 W Dutton Rd.	E.P. Medical Equipment	Х					
550 W Dutton Rd.	Stone Wise	Х					
580 W Dutton Rd.	Stan's Custom Powder Coating	Х					
600 W Dutton Rd.	Marco Roofing	X					

Another business is located at 500 West Dutton Road. This business was omitted from the DEIS but is included as a displaced business in the FEIS. The Preferred Alternative will result in the property at 500 West Dutton Road being landlocked.

#### **Market for Business Relocation**

As of April 28, 2009, a search of the Medford Area Multiple Listing Service indicates the following available properties by category, size, and price:

- Industrial Land: 25 listings of 0.34 acres to 89.10 acres priced from \$76,420 to \$900,000
- Industrial Buildings: 24 listings of 2,352 square feet to 40,000 square feet priced from \$12/s.f. to \$185/s.f.
- Commercial Land: 37 listings of 0.19 acres to 21.59 acres priced from \$159,600 to \$1,507,576
- Commercial Buildings: 32 listings from 328 s.f. to 70,320 s.f. priced from \$51/s.f. to \$1,267/s.f.

At this time, there appears to be ample commercial and industrial bare land and buildings to satisfy the relocation needs of this project.

The market for business real estate was reexamined prior to publication of the FEIS. As of February 2013, a search of CoStar Comps indicates the following available properties by category, size, and price:

- Industrial Land: 20 listings of 0.22 acres to 89.10 acres priced from \$165,000 to \$43,500,000
- Industrial Buildings: 41 listings of 1,326 square feet to 93,000 square feet priced from \$8.75/s.f. to \$256/s.f.
- Commercial Land: 42 listings of 0.40 acres to 48.56 acres priced from \$35,000 to \$13,445,000
- Commercial Buildings: 53 listings from 736 s.f. to 57,093 s.f. priced from \$36.38/s.f. to \$458.66/s.f.

As of February 2013, there still appears to be ample commercial and industrial bare land and buildings to satisfy the relocation needs of this project.

## **Right-of-Way Cost Estimate**

Table 3.3-6 summarizes the estimated costs for purchase of right-of-way for the project in 2011 dollars. No appraisals were made and no on-site inspections were performed. These real estate cost estimates are for budget purposes only.

Table 3.3-6 Estimated Right-of-Way Costs (in millions)<sup>1</sup>

SD Alternative			DI Alternative			JTA Phase		
Α	В	C	Α	В	C	Α	В	C
\$79.2	\$91.7	\$80.1 \$111.1 <sup>2</sup>	\$78.5	\$90.9	\$79.4	\$34.9	\$40.1	\$34.8 \$26.3 <sup>3</sup>

Notes:

<sup>1</sup>DEIS right-of-way costs are in 2011 dollars.

Preferred Alternative right-of-way costs for the FEIS are in 2023 dollars, inflated utilizing an average historic U.S. inflation rate of

<sup>3</sup>JTA phase right-of-way costs for the FEIS are in 2014 dollars, inflated utilizing an average historic U.S. inflation rate of three percent.

Table 3.3-6 now includes updated cost estimates for purchase of right-of-way for the project. The costs have been reduced due to design changes since the publication of the DEIS, which reduced the amount of property needed, and inflated to the expected year of expenditure for each phase (2014 for the JTA phase and 2023 for the Preferred Alternative).

# 3.3.3.3 Utility Impacts

Utilities located within ODOT's right-of-way that have to be moved in association with the project are not compensable. Utilities located outside ODOT's right-of-way that must be moved for construction are compensable. Required permits are the responsibility of the utility.

The total estimated cost for utility relocations to be paid by ODOT would be approximately \$13.9 million. Potential utility impacts and preliminary costs for relocation of affected utilities have been estimated based on information provided by ODOT and the utilities as summarized in Table 3.3-7.

ODOT will continue to coordinate with the utility owners during the design phase to avoid disruption of service. Some utilities may require survey staking prior to commencing the roadwork in order to allow them time to install critical infrastructure elements.

During fieldwork, it was noted that the public water storage tank, located at 500 West Dutton Road, and shown on Figure 3.3-8, does not have public water or sewer. The owner of this parcel currently provides water from his well to the fire department's water storage tank that is located within the area to be acquired for right-of-way.

**Table 3.3-7 Utility Impact Cost Estimates** 

Utility	<b>Total Estimated Cost</b>	State Reimbursable Portion <sup>1</sup>		
Avista	\$240,000	\$0		
Charter Communications	\$30,000	\$0		
City of Medford, Sewer/Storm water <sup>2</sup>	\$5,000,000	\$4,500,000		
Embarq	\$300,000	\$10,000		
Hunter Communications	\$920,000	\$120,000		
Rogue River Irrigation District	\$1,600,000	\$1,600,000		
Medford Water Commission	\$4,595,000	\$3,675,000		
Pacific Power & Light	\$1,300,000	\$800,000		
Qwest	\$350,000	\$100,000		
Rogue Valley Sewer Services	\$5,200,000	\$3,100,000		
Total Estimated Utility Cost	\$17,935,000	\$13,905,000		

Notes:

'State Reimbursable Portion is included in the Total Estimated Cost. State Reimbursable Portion is based on utilities' estimates that are provided to ODOT.

 $^{\rm 2}$  Impacted storm drain facilities may be considered part of the ODOT roadway design.

Source: Utilities Technical Memo

It is possible, indeed likely, that other properties are served via private wells and septic systems. Any septic systems or wells that are found to be in the acquisition area will be addressed during the appraisal and acquisition process. Other utilities will be relocated as necessary during construction.

# 3.3.4 Avoidance, Minimization, and/or Mitigation Measures

During the project development, ODOT engineers worked to minimize right-ofway impacts that could occur as a result of physical displacement or as a result of land locking, or removing access to a parcel without providing an alternate access.

Figure 3.3-13



Potential mitigation measures are described below.

#### 7126 Agate Road

The business located at 7126 Agate Road (Parcel number 361W20CB800) is currently accessed from Agate Road via a non-publically owned segment of Avenue A. This is shown in Figure 3.3-13. The bypass would remove this access from Agate Road. Alternative access could be provided along Avenue A to the east of this business connecting with existing OR 62. This would eliminate the need to purchase this property, enable the parcel to continue to be used for business purposes, and could save \$2,150,000 in right-of-way cost.

Because this property will not be impacted by the JTA phase, if any mitigation for this property were to occur, it would not occur until later phases of the project after the JTA phase is constructed. Final resolution of this proposed mitigation measure will occur as part of final design and property acquisition for later phases. As of publication of the FEIS, ODOT is not committing to this mitigation measure.

#### 7930 Agate Road

The proposed impacts of the bypass on the parcel located at 7930 Agate Road (parcel number 361W17C1200) are the same for both alternatives: the building would not be impacted, but the parcel would be landlocked due to loss of driveway access from Agate Road. This is shown in Figure 3.3-14. ODOT may consider pursuing a non-exclusive access easement from the adjacent parcel to the south, 1795 Antelope Road (parcel 361W20B900), along its northern property line from the proposed extension of 14th Street in order to provide access to 7930 Agate Road. Doing so would eliminate the need to purchase the entire property, enable the parcel to continue to be used for business purposes, and eliminate most, if not all, of the estimated nearly \$800,000 damages to parcel 361W17C1200.

#### West Dutton Road Business Impacts

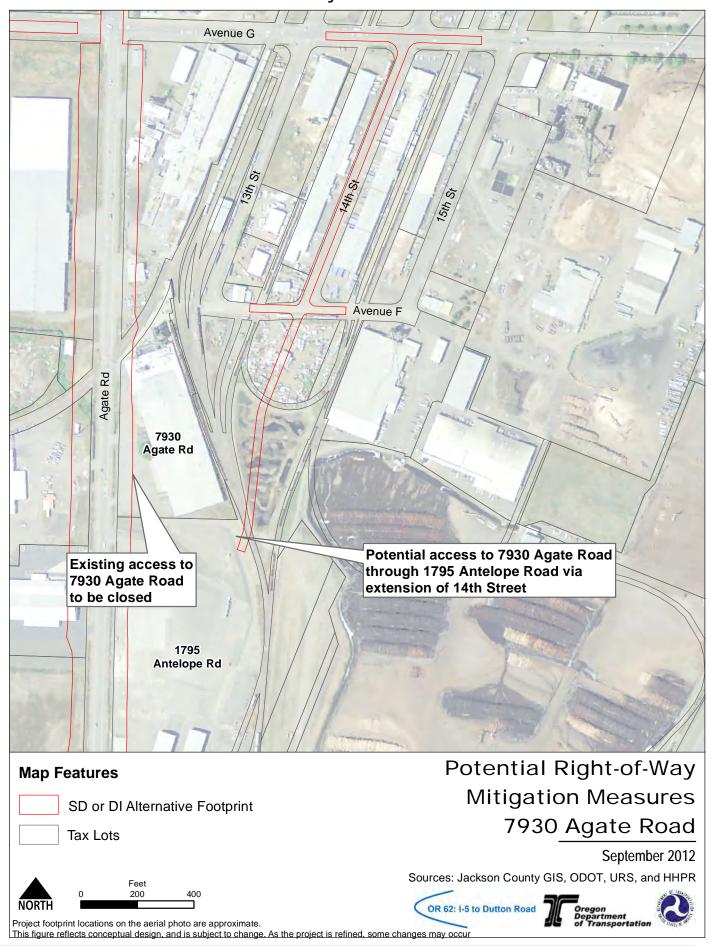
The northern end of the alignment land locks and or physically impacts numerous buildings south of and adjacent to West Dutton Road. These are shown in Figure 3.3-15. Parcels that appear undeveloped in the aerial photo used during the analysis have now been developed or are under construction. An estimated 14 businesses would be displaced in this area of the project. This could be higher if buildings that were vacant at the time of this analysis become occupied prior to right-of-way acquisition.

The proposed West Dutton Road over-pass that would be constructed as part of the project would result in the removal of a 10 unit condominium industrial building located at 732 West Dutton Road (parcel number 361W17AA301). This is shown in Figure 3.3-15. At the time this analysis was completed, this building was vacant. It is estimated that an additional \$1,000,000 in right-of-way cost could be saved by moving the proposed West Dutton Road over-pass road to the west approximately 50 to 70 feet onto the adjoining vacant industrial land. This would eliminate the need to remove this condominium industrial building. This change could also eliminate the need for 10 business displacements or more, if new businesses have moved in since this analysis was completed.

A 12 unit condominium industrial building, located at 636 to 658 West Dutton Road (parcel number 361W17AA90000) would be impacted by both the main line of the bypass and a proposed frontage road across its south end. This is shown in Figure 3.3-15. As of July of 2010, there were nine businesses operating at this parcel. A slight realignment of the frontage road across the south end of this parcel would save an additional \$400,000 and at least one business displacement. Combined, these two modifications could net a total savings of \$1,400,000 in right-of-way impacts.

As shown in Figure 3.3-15 FEIS, ODOT will realign the frontage road at the south end of 636 to 658 West Dutton Road to avoid impacting the 12 unit condominium industrial building located 636 to 658 West Dutton Road. As a result, the nine businesses previously identified as displacements in the DEIS will not be displaced by the Preferred Alternative.

**Figure 3.3-14** 



**Figure 3.3-15** 

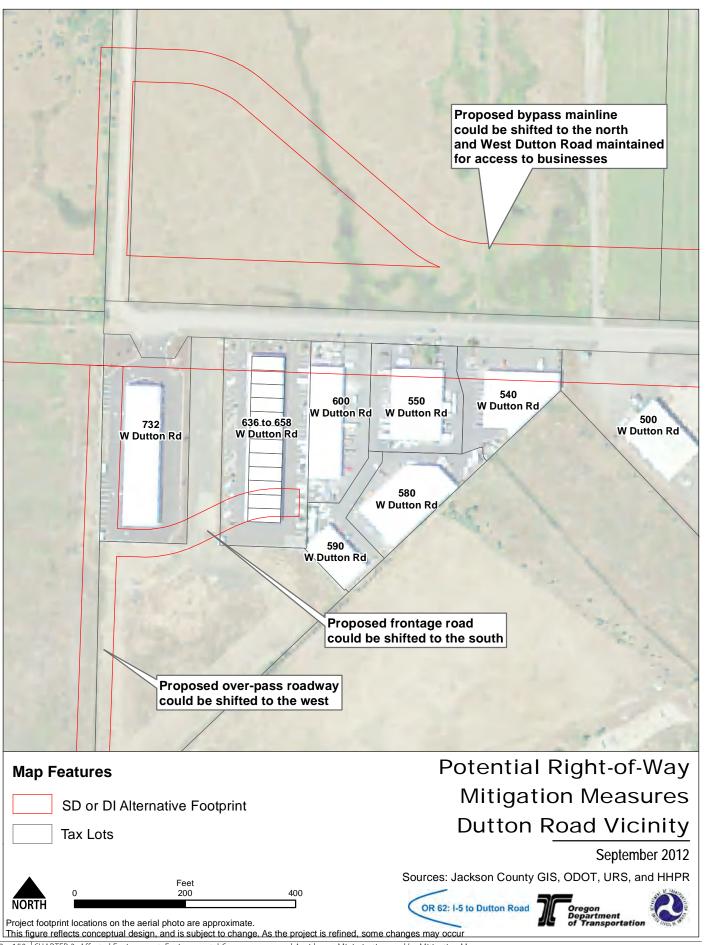
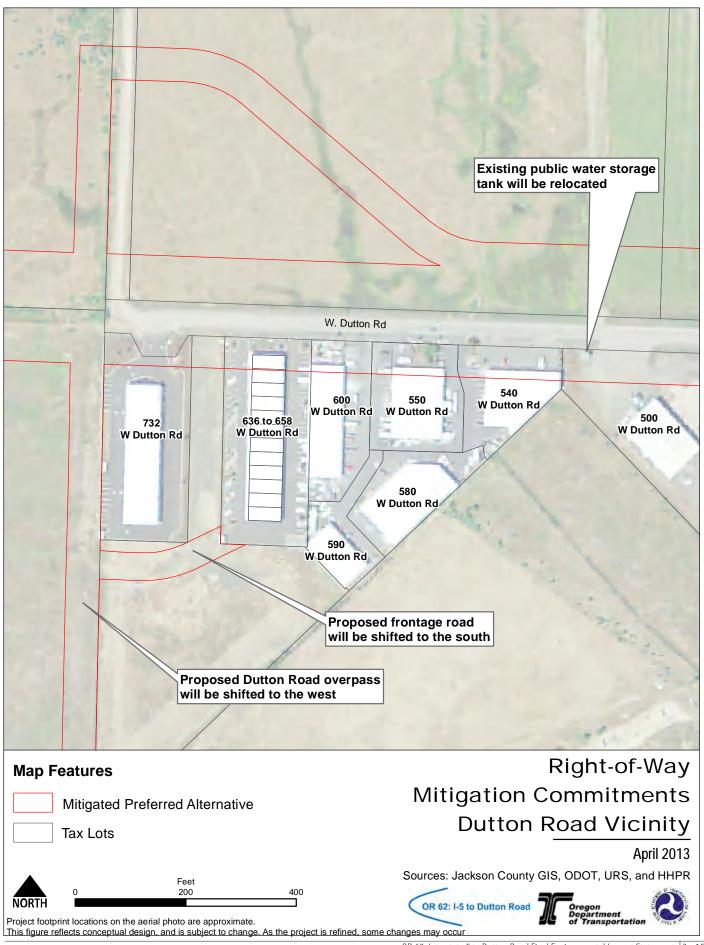


Figure 3.3-15 FEIS



The public water storage tank, located at 500 West Dutton Road, would be relocated to a location suitable for continued use by the fire department.

An additional right-of-way minimization measure could involve realigning the centerline of the proposed bypass approximately 200 feet to the north of West Dutton Road onto undeveloped pasture land in the vicinity of 636 to 658 West Dutton Road and 732 West Dutton Road discussed above and shown on Figure 3.3-15. Existing Dutton Road could then serve as access for all eight industrial buildings which are occupied by many businesses. This revision would reduce a large number of business displacements and eliminate the need to acquire property or property rights from eight improved files. This project alignment shift would also reduce the total cost for right-of-way by approximately \$6,380,000.

These properties will not be impacted by the JTA phase. As of publication of the FEIS, ODOT is not committing to this mitigation measure.

#### 3.3.4.1 Residential and Business Relocations

#### **Access Impacts**

This project would affect access to many properties. Reasonable access would be provided to each property or damages, if compensable, would be determined by the appraisal process. A landlocked property owner would be offered the appraised value for the loss of access. In some cases, access would be eliminated from an existing location for safety or traffic control reasons. If there is an alternate, reasonable access to the remainder, there may be no compensable damage. The right-of-way cost estimate (shown in Table 3.3-6) includes the amount of damages to each property due to the lack of access.

The entire bypass will be access-controlled. The only access allowed to the highway will be via interchange ramps. Right-in/right-out issues are limited to crossing arterials at each interchange. This restriction of access is within ODOT's regulatory powers, and no compensable damages can be appraised. Properties that have access reservations at locations where the approach to the highway would be closed would be compensated for the transfer of the reservation property right based on an appraisal of the property before and after acquisition of the reservation.

When an ODOT permitted approach to the highway is closed, the property owner may be eligible for a discretionary remedy to correct internal circulation issues. The remedy consideration is required by Senate Bill (SB) 86, but it is offered at the discretion of ODOT, and the remedy determination is neither negotiable nor can it be appealed.

#### Relocations

For those displaced by the project, ODOT provides a relocation assistance program. The "Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970" and the "Uniform Relocation Act Amendments of 1987" insure the fair and equitable relocation and re establishment of persons, businesses, farms and nonprofit organizations displaced as a result of federal or federally assisted programs. This is done so that displaced persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole. No project shall be advertised for construction until all eligible residential displacements have either obtained or have the right of possession to comparable replacement housing, or have been offered comparable replacement housing which is within their financial means and available for immediate occupancy. Eligible businesses and nonprofit organizations displaced by the project will also be offered relocation benefits. In conformance to Title VI of the U.S. Civil Rights Act of 1968, available replacement housing will be offered to all persons regardless of race, color, religion, sex, or national origin.

Eligible residential owners and renters displaced by the project may qualify for benefits which may include, but are not limited to, a rent supplement, a housing additive, including some incidental closing costs, costs to move personal property,

and, if approved, temporary storage of personal property.

Eligible displaced businesses may qualify for relocation benefits, including moving cost reimbursement in addition to limited reimbursements for business reestablishment, which is capped at \$10,000, and site search expenses. Alternatively a "fixed payment" amount, which is capped at \$20,000, would also be available for qualifying businesses displaced by the project.

Off premise signs (billboards) that are impacted may be eligible to be moved with relocation benefits.

Lawful occupants shall not be required to move unless they have received at least 90 days advance written notice of the earliest date by which they may be required to move.

An appeal process has been established for any relocates disputing any relocation eligibility or claim rulings.

Additional general information about ODOT's acquisition process and relocation assistance program can be found in the following pamphlets in Appendix D: Acquiring Land for Highways and Public Projects and Moving Because of the Highway or Public Projects? in English and Spanish.

# 3.3.5 Avoidance, Minimization, and/or **Mitigation Commitments Incorporated into the Preferred Alternative**

ODOT makes the following commitments.

#### **JTA Phase**

There are no mitigation commitments exclusive to the JTA phase.

#### JTA Phase and Preferred Alternative Subsequent to Construction of the JTA Phase

- All real estate needed to construct and operate the project will be acquired following the applicable FHWA policies, directives, and guidance regarding the purchase of property rights for highway use and consistent with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 USC Chapter 61). ODOT will determine just compensation for the required real estate interests based on an appraisal, residual damages, the cost to cure damages, and other relevant items as determined by the
- ODOT will provide relocation assistance to displaced residents and businesses consistent with the applicable FHWA policies and directives and the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 USC Chapter 61).

#### Preferred Alternative Subsequent to Construction of the JTA Phase

- ODOT will complete a cost/benefit analysis to determine if a public, ODOT-maintained road is necessary to provide an approach road to 7930 Agate Road, which will be landlocked by the Preferred Alternative. Including this approach road as part of the project will eliminate the need to purchase the entire property, enable the parcel to continue to be used for business purposes, and eliminate most, if not all, of the estimated nearly \$800,000 in damages to parcel 361W17C1200.
- ODOT will design the West Dutton Road overpass to avoid the removal of a 10-unit condominium industrial building located at 732 West Dutton Road (parcel number 361W17AA301, shown in Figure 3.3-15 FEIS). This design will require shifting the local roadway to the west approximately 50 to 70 feet onto the adjoining vacant industrial
- ODOT will shift the proposed approach road planned to connect between the West Dutton Road overpass and the property at 636 to 658 West Dutton Road to the south (shown in Figure 3.3-15 FEIS) in order to avoid impacting the property at 636 to 658 West **Dutton Road.**
- ODOT will relocate the public water storage tank located at 500 West Dutton Road to a location suitable for continued use by the fire department.

#### **Section 3.4 Content**

3.4.1 Regulatory Setting

3.4.2 Affected Environment
3.4.2.1 Low-Income Populations

3.4.2.2 Race and Ethnicity

3.4.2.3 Location of Potentially Impacted EJ Populations

3.4.2.4 Outreach to EJ Populations

3.4.3 Environmental Consequences

3.4.3.1 Direct and Indirect Impacts on EJ Populations

3.4.3.2 Disproportionately High and Adverse Impacts

3.4.4 Avoidance, Minimization, and/or Mitigation Measures

# ENVIRONMENTAL JUSTICE

3.4

# 3.4 Environmental Justice

This section describes Environmental Justice (EJ) populations in the vicinity of the proposed project and the potential impacts to those populations. In addition, the likelihood of disproportionately high and adverse impacts to EJ populations is assessed.

# 3.4.1 Regulatory Setting

All projects involving a federal action (funding, permit, or land) must comply with Title VI of the Civil Rights Act and Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. Title VI prohibits discrimination on the basis of race, color, or national origin. EO 12898 states, "[t]o the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, each agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, polices, and activities on minority populations and low-income populations..." (EO 12898, Section 1-1).

## 3.4.2 Affected Environment

## 3.4.2.1 Low-Income Populations

Figure 3.4-1 shows the percent low-income and percent minority populations within the census block groups adjacent to project alternatives. Colors identify census block groups with higher percentages of low-income or minority populations than the county average.

Fourteen percent of the Jackson County population was considered low-income, based on the 2010 U.S. Census. Low income populations in census block groups adjacent to the build alternatives ranged from 0 percent to 69 percent in 2010. Census block groups with percentages of low-income population higher than the county average of 14 percent, are located in the City of Medford at the project's southern terminus and in White City. The census block group encompassing the VA SORCC (i.e., census tract 13.01, block group 2) has the highest percentage low-income population (69 percent) of block groups adjacent to project alternatives.

For further information regarding environmental justice, including citations to source documents, refer to the OR 62 Corridor Solutions Project Socioeconomics Technical Report, July 2011. This report is available from the ODOT contact person identified on page i of this EIS.

## 3.4.2.2 Race and Ethnicity

Sixteen percent of the Jackson County population was considered minority based on the 2010 Census (U.S. Census 2010a). Populations in census block groups adjacent to project alternatives ranged from 11 percent to 30 percent minority in 2010. Figure 3.4-1 shows that census block group populations adjacent to project alternatives with a higher percentage minority population than the Jackson County average are located in White City, east and west of existing OR 62 between White City and Vilas Road, and east of existing OR 62 south of Vilas Road to Whittle Avenue in the City of Medford.

# **3.4.2.3 Location of Potentially Impacted EJ Populations**

The 2010 US Census was used to identify EJ populations the build alternatives and JTA phase could potentially impact. The U.S. Census includes information on income at the block group level. As Figure 3.4-1 shows, block groups in the project area are large. However, the U.S. Census includes counts of minorities at the *block level*, which are much smaller, as Figure 3.4-1 shows. Figure 3.4-1 shows census blocks with minority population percentages higher than the Jackson County average of 16 percent.

Project alternatives have the potential to impact EJ populations in 14 areas where each of the following applies:

- The area is adjacent to the alignments of the build alternatives and JTA phase or close enough to the alignments that their residents may be subject to adverse impacts from the build alternatives.
- 2010 Census results at the block group level show a higher percentage of low income and/or minority populations than the percentages in Jackson County as a whole.

Figure 3.4-2 shows the locations of the 14 areas (designated as EJ Areas 1 through 14) that meet these criteria. Figures 3.4-3 through 3.4-8 show these EJ areas in detail. For each EJ area, Table 3.4-1 lists the census blocks in the EJ area, the percent minority in the census block from the 2010 Census, what census tract and block group the EJ area is in, and the percentage of the block group population that were low-income from the 2010 Census.

The 14 identified areas contain all the potential EJ groups that the build alternatives or JTA phase could impact. Windshield surveys indicate that there are no areas outside of the 14 areas where there are higher percentages of low-income persons than in Jackson County as a whole and that would be adversely impacted by project improvements.

The methodology for identifying minority populations relied on census data because field observations and consultations with minority group representatives were not considered to be sufficiently reliable, because, as the numbers of minorities and percentages in Figures 3.4-3 through 3.4-8 show, even where the percentage of minorities is higher than in Jackson County as a whole, the number of minorities is comparatively small and they are interspersed with non-minorities.

**Figure 3.4-1** 

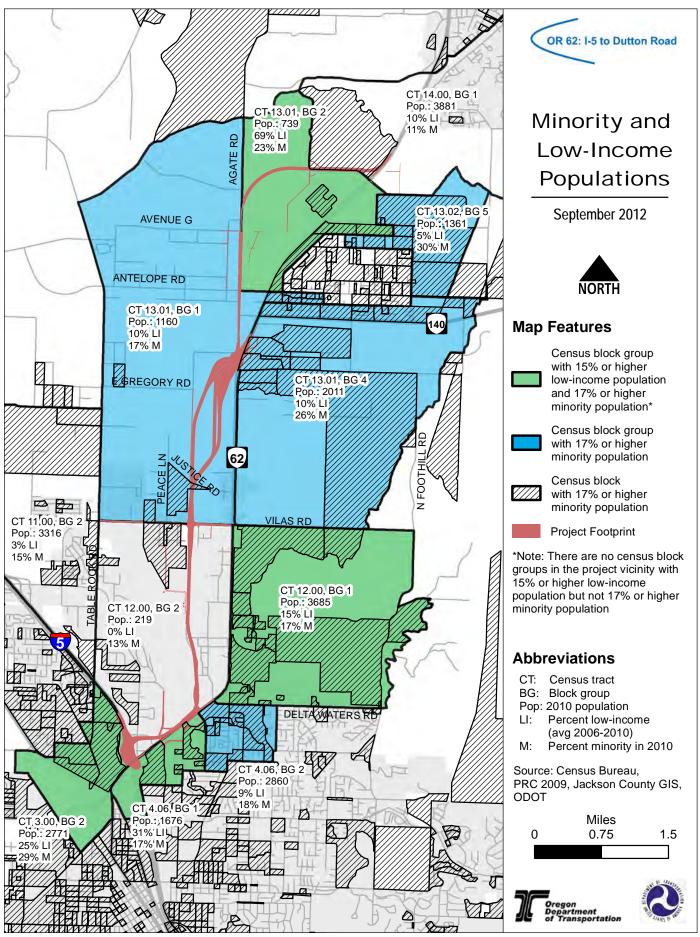
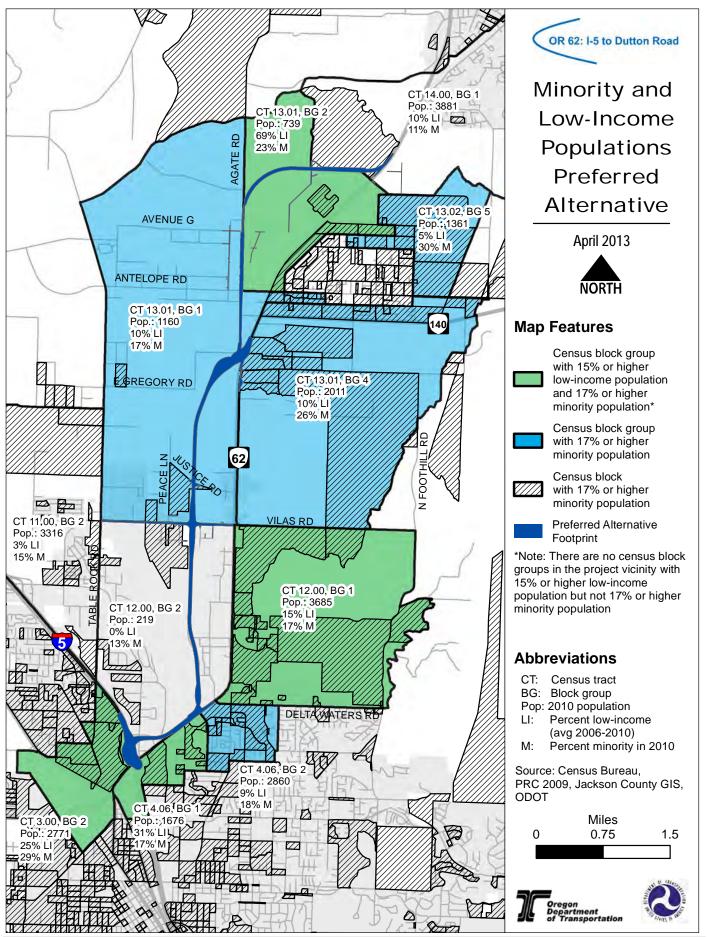


Figure 3.4-1 FEIS



**Figure 3.4-2** 

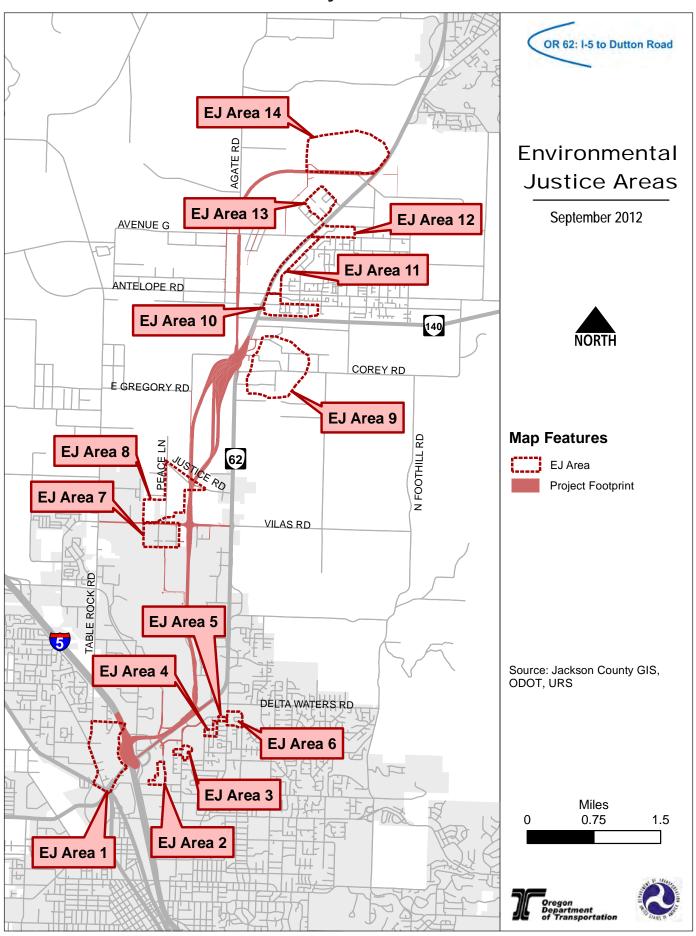


Figure 3.4-2 FEIS

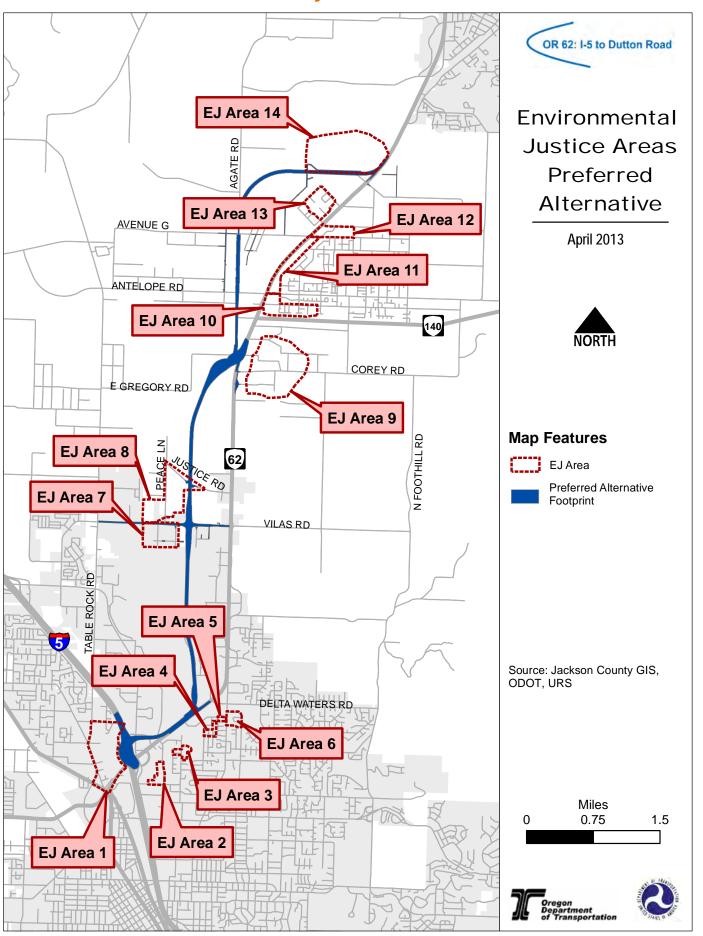
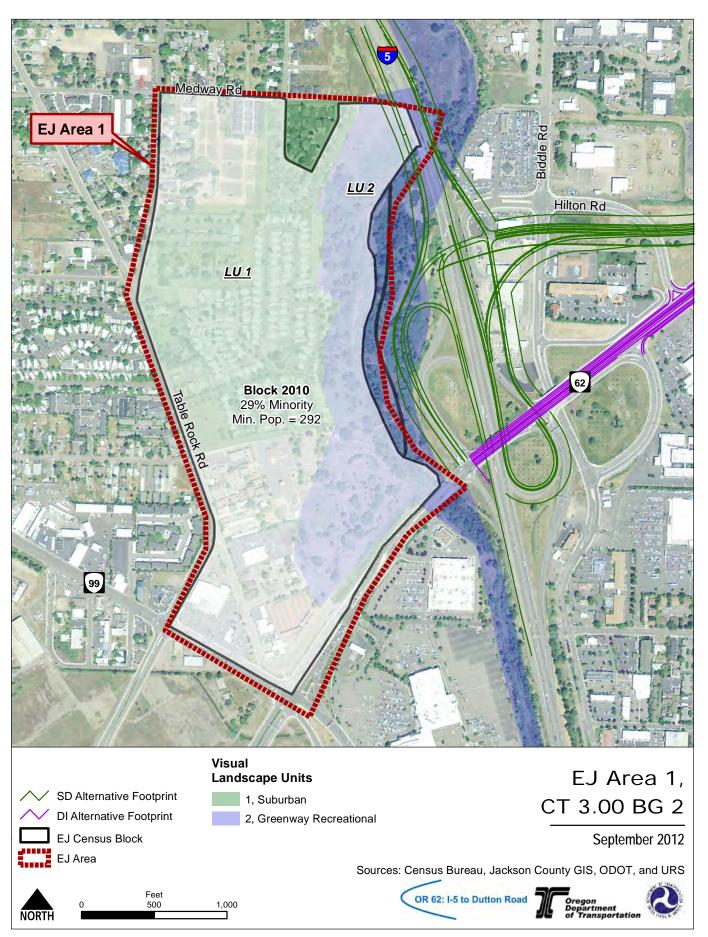


Figure 3.4-3



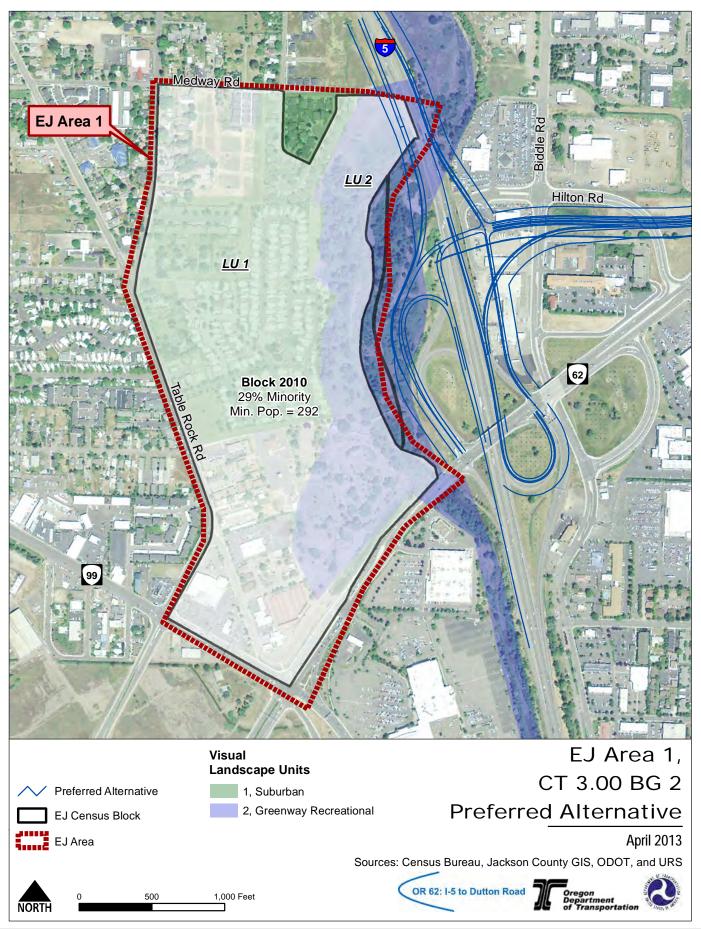


Figure 3.4-4

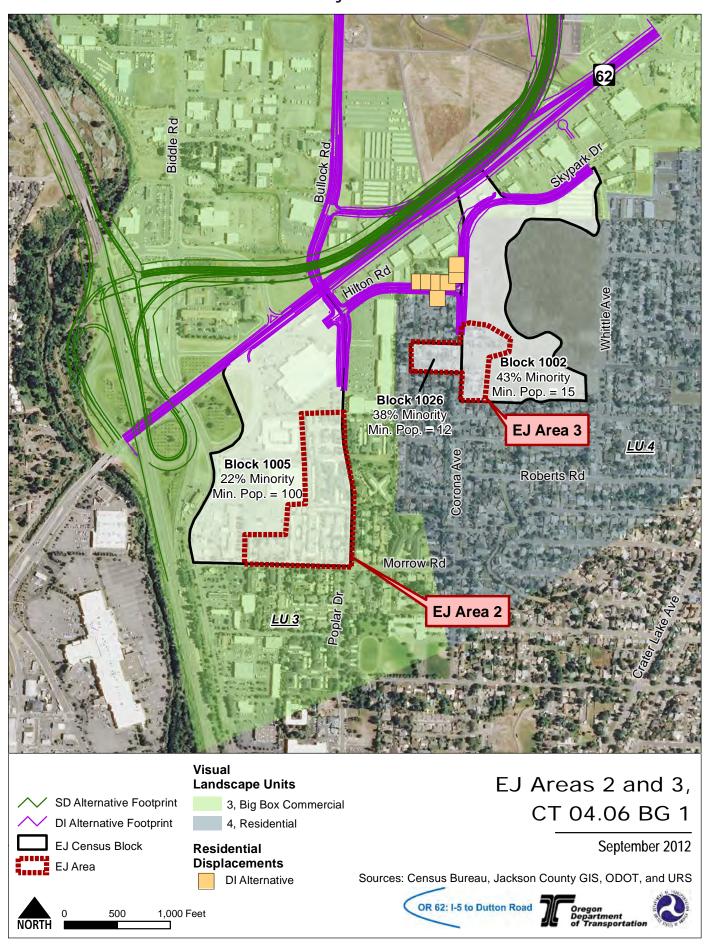
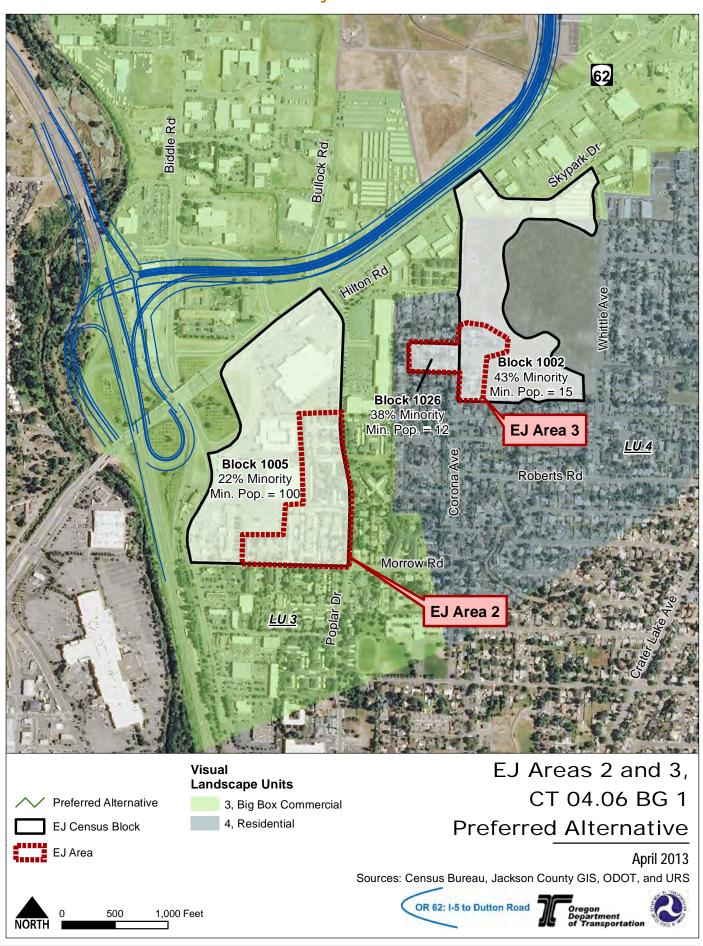


Figure 3.4-4 FEIS



**Figure 3.4-5** 

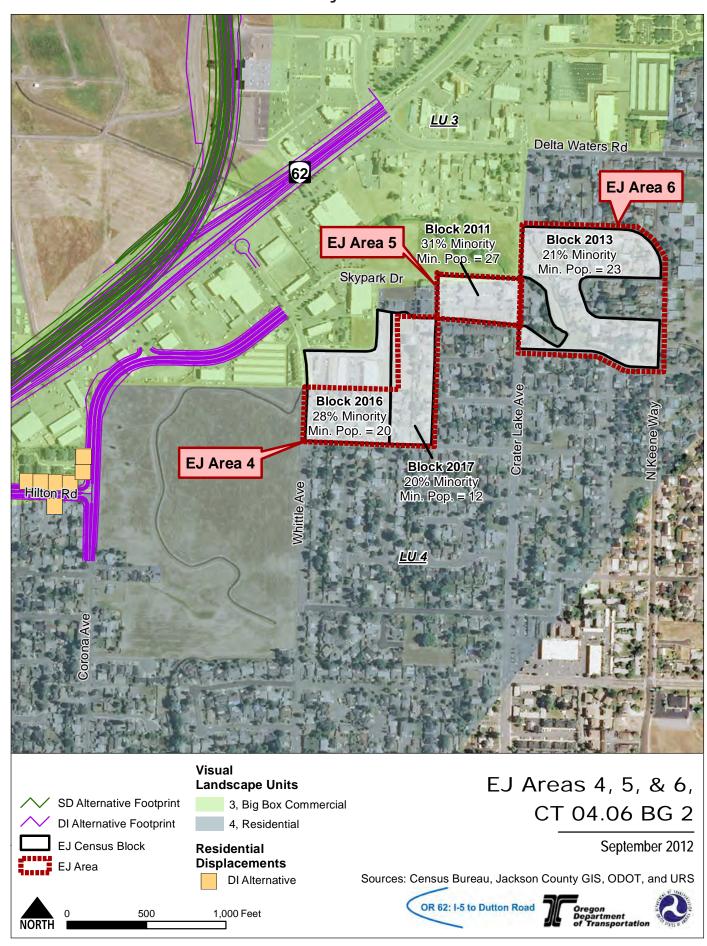
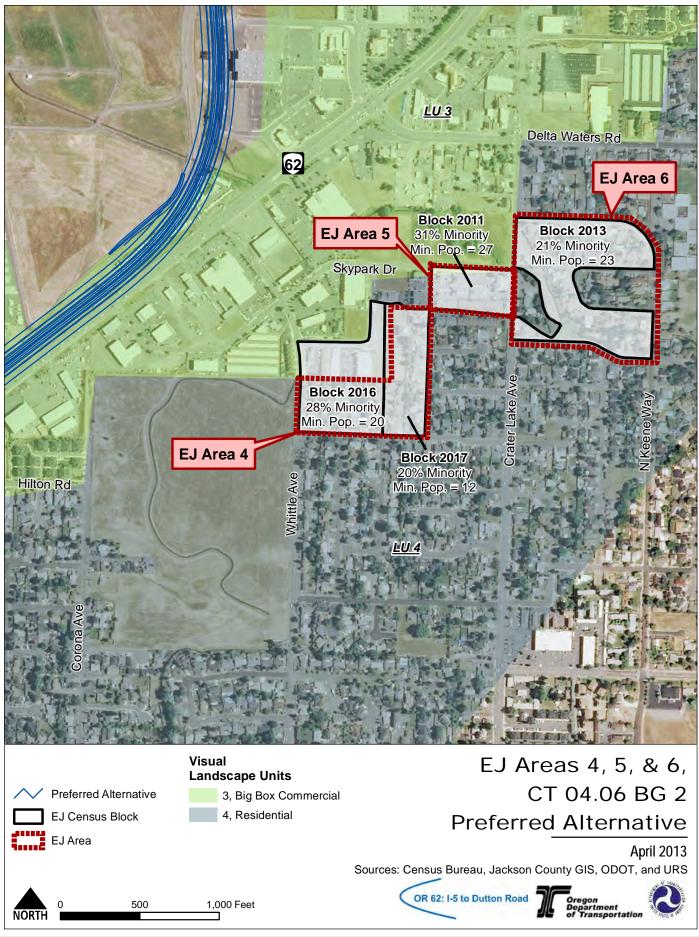


Figure 3.4-5 FEIS



**Figure 3.4-6** 

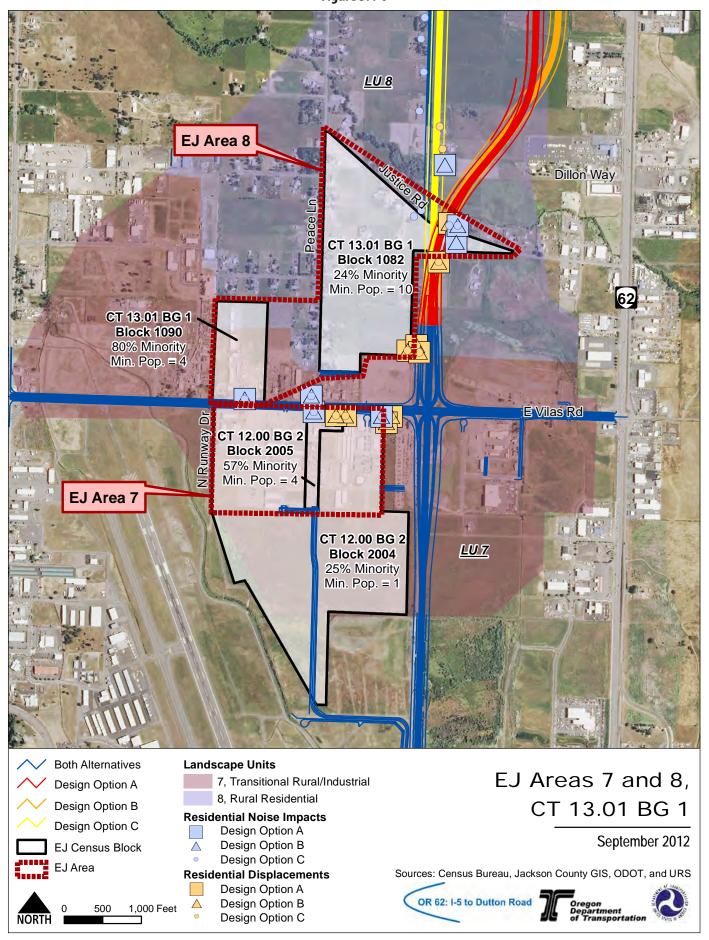
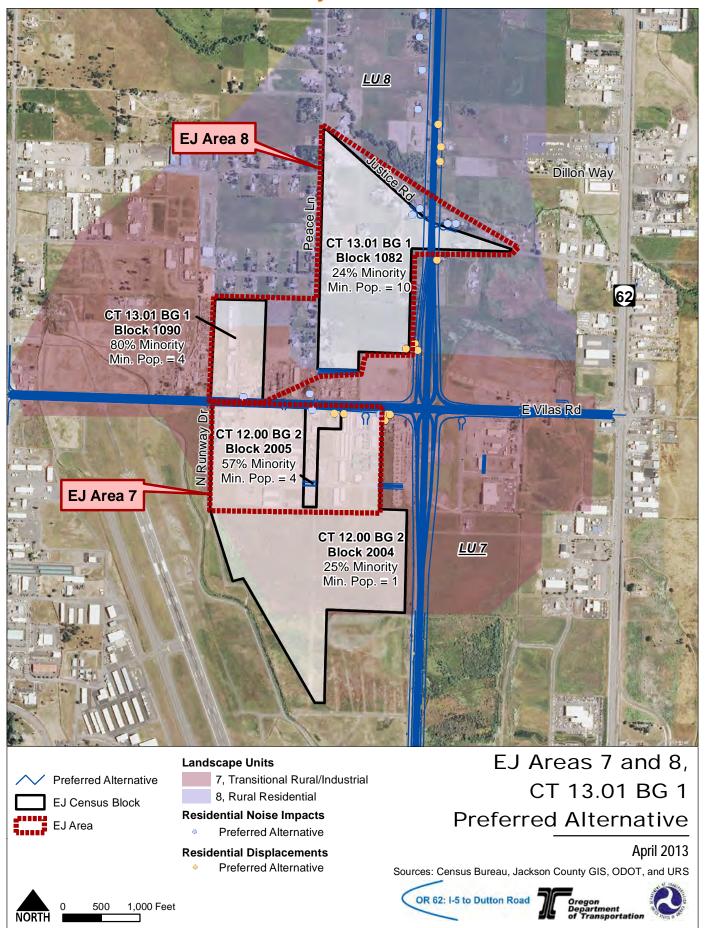


Figure 3.4-6 FEIS



**Figure 3.4-7** 

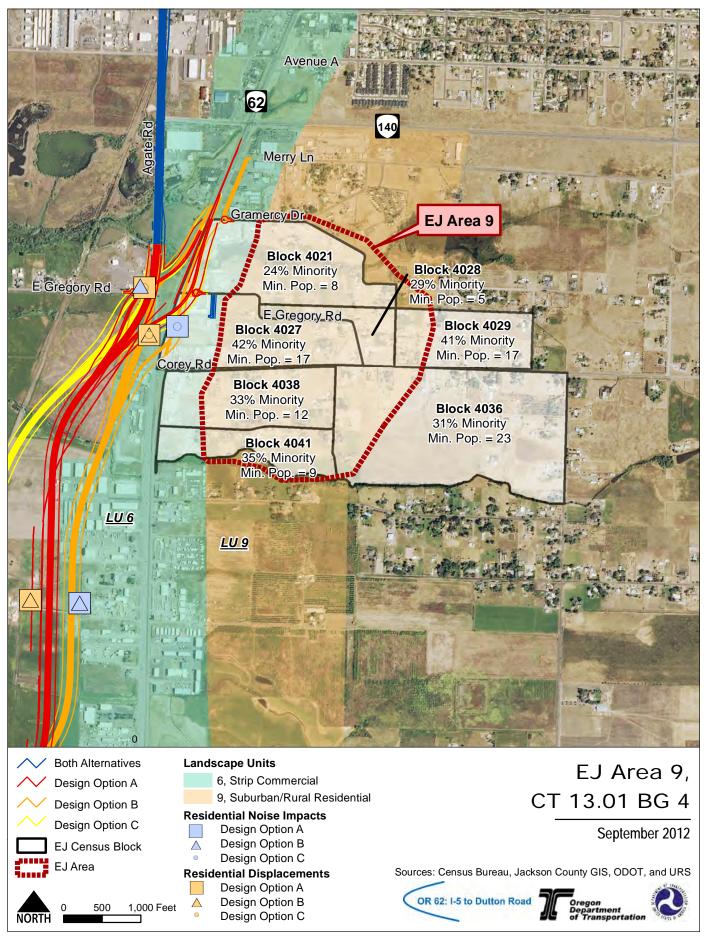
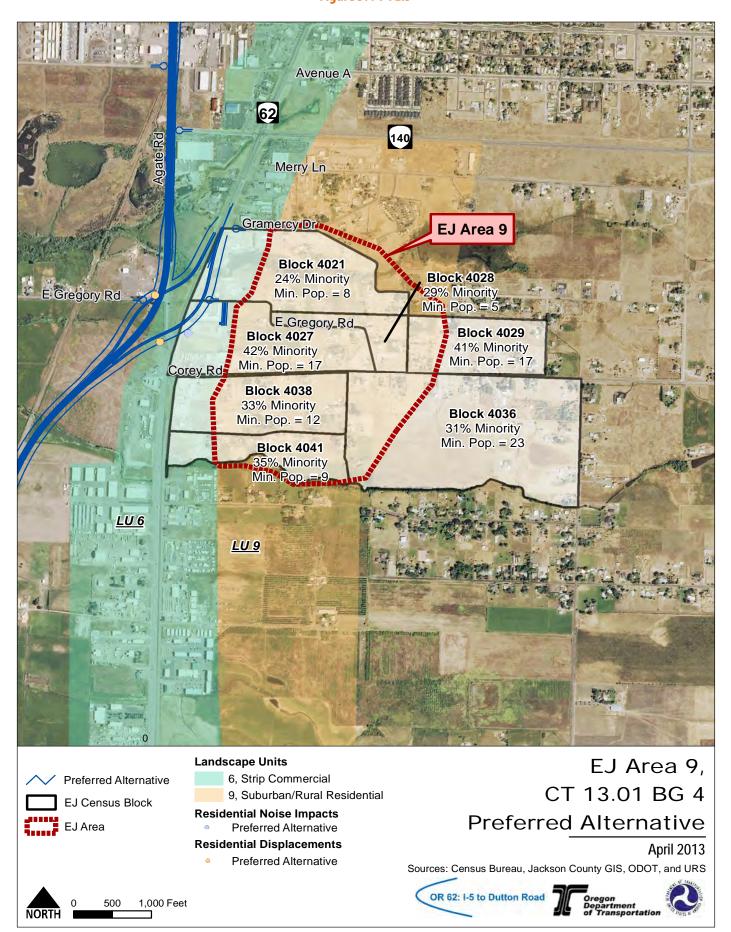


Figure 3.4-7 FEIS



**Figure 3.4-8** 

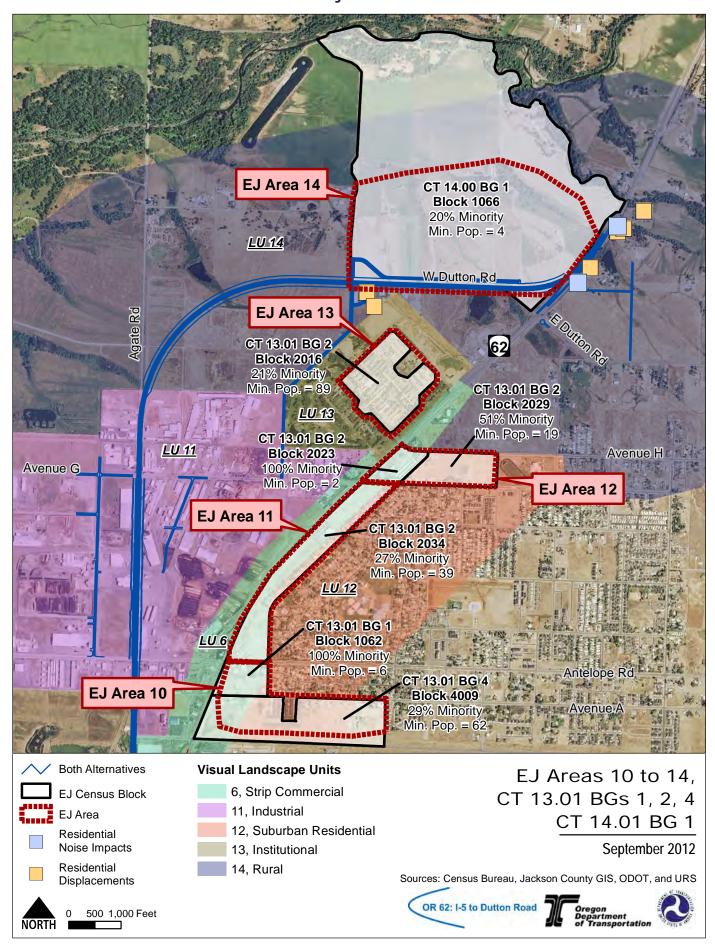


Table 3.4-1 EJ Areas

		Census Blocks		Census Block Group				
Area Number	Figure Number	Block Number	Percent Minority	Census Tract Number	Block Group Number	Percent Low Income	Notes	
1	3.4-3	2010	29	3.00	2	25		
2	3.4-4	1005	22	4.06	1	31		
3	3.4-4	1026 1002	38 43	4.06	1	31		
4	3.4-5	2016 2017	28 20	4.06	2	9		
5	3.4-5	2011	31	4.06	2	9		
6	3.4-5	2013	21	4.06	2	9		
7	3.4-6	2004 2005	63	12.00	2	0	The percent minority is for the combined census blocks.	
8	3.4-6	1082 1090	24 80	13.01	1	10		
9	3.4-7	4021 4027 4028 4029 4036 4038 4041	24 42 29 41 31 33 35	13.01	4	10		
10	3.4-8	1062 4009	100 29	13.01	4	10		
11	3.4-8	2034	27	13.01	2	69	The percent minority	
12	3.4-8	2023 2029	54	13.01	2	69	in EJ Area 12 is for the combined census blocks. The majority of the low income persons in census tract 13.01, block group 2, are thought to live in the VA SORCC in EJ Area 13.	
13	3.4-8	2016	21	13.01	2	69		
14	3.4-8	1066	20	14.00	1	10		

Source: 2010 U.S. Census; 2010 American Community Survey, 5-year estimates.

# 3.4.2.4 Outreach to EJ Populations

It is FHWA policy to "administer its statutes to identify and avoid discrimination and disproportionately high and adverse effects on minority populations and low-income populations by... providing public involvement opportunities and considering the results thereof, including providing meaningful access to public information concerning the human health or environmental impacts and soliciting input from affected minority populations and low-income populations in considering alternatives during the planning and development of alternatives and decisions." 1

<sup>&</sup>lt;sup>1</sup>FHWA Final Order 6640.23a: FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (June 14, 2012).

Chapter 7 provides a detailed description of the project's public involvement program that has spanned from 2004 to present and that will continue through the DEIS comment period and publication of the project's FEIS. This section provides a summary of the project's specific efforts to comply with the outreach element of Executive Order 12898 on Environmental Justice. It focuses both on elements of the project's overall public involvement program and how many of them work to support the executive order, and on specific project outreach efforts toward EJ populations (i.e., low income and minority).

Following are elements of the project's overall public involvement program that meet FHWA's EJ policy on public outreach:

- To recruit representatives of EJ populations to the project's Citizen Advisory Committee (CAC), ODOT sent invitation letters to all 70 occupants of three apartment buildings in White City because of the high probability that residents included EJ populations.
- Two members of the CAC were knowledgeable of the needs of EJ populations.
   One member was a retired manager with Jackson County Social Services and the other was a retired social worker for the VA SORCC.
- Jason Elze, Director of Development for the Jackson County Housing Authority, has joined the CAC as a voting member.
- Lulu Knutsonde, Bilingual Family Advocate and Health Assistant with the Jackson County Health Department, has joined the CAC as a voting member.
- Public notice of the October 4, 2004, public scoping meeting and September 18 and 19, 2006, open houses was published in the *Mail Tribune* in both English and Spanish.
- Spanish language interpreters were available at the project's October 4, 2004, public scoping meeting and September 18 and 19, 2006, open houses.
- The October 4, 2004, public scoping meeting and September 19, 2006, open house were held at the Family Resource Center in White City because White City has relatively high percentages of minority and low-income residents, which the Family Resource Center serves.
- In summer 2011, ODOT purchased an advertisement announcing open houses regarding possible transit components of the project in the local Hispanic newspaper *Compra & Vende* and the newspaper published ODOT's news release regarding the meetings.
- ODOT published notice of the DEIS in local media in both English and Spanish.
   This included a notice in the local Hispanic newspaper Compra & Vende,
   which was also sent a news release announcing publication of the DEIS and combined public hearing and open house.
- Notice of publication of the DEIS and the combined public hearing and open house has also been made through announcements posted at public centers and businesses that tend to be visited by people from EJ populations, such as local markets (including ethnic markets), the VA Hospital, churches, community centers, and community rooms at low-income apartment complexes. Local social service providers have also received notice of publication of the DEIS and the combined public hearing and open house.
- The executive summary of this EIS has been translated into Spanish.
   Translation of additional project documents will be made available, upon request.

The executive summary of this EIS was not translated into Spanish.

 A Spanish translator was available at the project's combined DEIS public hearing and open house.

A Spanish translator was available at the combined DEIS public hearing and open house October 17, 2012; one person requested and was provided Spanish translation services. Because of the absence of requests for project documents in Spanish, a Spanish translation of the executive summary of neither the DEIS nor the FEIS was prepared. No Spanish translations of project documents were requested. One CAC member is a minority.

- ODOT will anonymously survey the CAC members and attendees of the DEIS public hearing and open house to gather demographic data related to EJ populations. Responding to the survey will be voluntary.
  - ODOT did not survey the CAC members or attendees of the DEIS public hearing and open house to gather demographic data. Surveying the CAC members was not necessary because it was known that one member was a minority and none were low-income. Surveying attendees of the DEIS public hearing and open house was not necessary to draw the conclusion that attendance by minorities and low-income persons was very limited.
- After a preferred alternative is selected and before the FEIS is published, ODOT will
  identify residences and businesses that could be displaced by the project. ODOT
  will conduct interviews of the residents and business owners and use the results of
  the interviews to refine the project's outreach to EJ populations.

To date, ODOT has not conducted interviews of displaced residents or businesses because right-of-way negotiations will not occur until after the FEIS is published, both for the Preferred Alternative and the JTA phase.

None of the testimony on the DEIS offered at the combined public hearing and open house or submitted in writing specifically addressed EJ issues.

# 3.4.3 Environmental Consequences 3.4.3.1 Direct and Indirect Impacts on EJ Populations

#### **No Build Alternative**

The No Build Alternative would not have EJ impacts. There would be no residential displacements or changes to residential driveways or parking associated with the No Build Alternative. Traffic and transportation, air quality, noise, or visual changes would occur under the No Build Alternative due to population growth in the future. As with other project area residents, low income and minority residents would experience the congestion, long travel times, intersection and driveway blockages, and safety problems described in Section 3.1.3.1.

#### **Build Alternatives**

This subsection is divided into two parts. The first part addresses EJ Areas 1 through 6 and 9 through 13, as defined in Section 3.4.2.3, and describes how the impacts of the build alternatives in these areas would be minimal or limited. The second part addresses EJ Areas 7, 8, and 14 and explains why some of the impacts of the build alternatives would be high. Section 3.4.3.2 explains why the high impacts would not be disproportionate.

With the exceptions noted, the impacts of the build alternatives in this list would be the same or similar for all of the EJ Areas and are not further addressed in the assessments below:

- When traveling through the project area, the residents of all the EJ areas addressed below would experience the benefits of the build alternatives described in Section 3.1.3.2, including reduced congestion and travel time, shorter traffic queues at intersections, fewer intersections and driveways blocked by traffic queues, and lower crash rates. In addition, in several instances mentioned in the area-by-area assessments below, the build alternatives would reduce traffic volumes on streets in the EJ areas.
- As stated in Section 3.16.3.1, the project would not cause or contribute to any
  new violations of any air quality standard or increase the frequency or severity of
  any existing air quality violation. Therefore, this section does not further address
  impacts on air quality. Section 3.16 of this chapter provides additional detail
  regarding the air quality analysis for this project.
- In all the EJ areas except EJ Areas 7 and 8, because of the distance between project construction activities and EJ area residences, noise from project construction, as described in Section 3.17.3.2, is expected to be inaudible or low-level. For the same reason, all EJ areas except EJ Areas 7 and 8 are not expected to experience the potential impacts of project construction on air quality described in Section 3.16.3.3.

#### **EJ Areas For Which Impacts Would Be Minimal or Limited**

In EJ Areas 1 through 6 and 9 through 13, the build alternatives would have minimal or limited adverse impacts. "Minimal" means the impacts would be low-level or not noticeable. "Limited" means there would be impacts, but the level of the impacts would be low to moderate. Following is a discussion of the impacts that would occur within each of these EJ areas. Unless specifically noted in the discussion for an EJ area, there would be no adverse impact in that area due to the build alternatives (e.g., if there would be no displacements within a specific EJ area, then displacements are not discussed in that EJ area section).

#### *EJ Area 1 (Figure 3.4-3)*

The build alternatives would have minimal impacts in EJ Area 1. The build alternatives would not alter the roadway network in the EJ Area 1 and would not affect community cohesion. As Table 3.8-2 indicates, the visual impact of the SD Alternatives in Landscape Unit (LU) 1, in which all the residences in EJ Area 1 are located, would be low and the visual impact of the DI Alternative in LU 1 would be very low.

#### *EJ Area 2 (Figure 3.4-4)*

The impacts of the build alternatives on the residents of EJ Area 2 would be limited. Under the SD Alternative, traffic volumes would be about the same as under the No Build Alternative. Under the DI Alternative, traffic volumes on Poplar Drive are forecast to be 42 percent lower than under the No Build Alternative in 2035. As Table 3.8-2 indicates, the visual impact of the SD Alternative in LU 3, which contains the residences in EJ Area 2, would be "average," with a score of 4 out 7. Section 3.8.2.1 states that a score of 1 indicates a very low impact and a score of 7 a very high impact. Table 3.8-2 indicates that the visual impact of the DI Alternative in LU 3 would be moderately low.

#### *EJ Area 3 (Figure 3.4-4)*

The impacts of the build alternatives on EJ Area 3 would be limited. Under the DI Alternative, traffic volumes on Hilton Road are forecast to be about 50 percent greater than under the No Build Alternative in 2035, an ADT of 3,125 versus 2,100.<sup>2</sup> An ADT of 3,125 is slightly above the range for a "Standard Residential Street," which is how the City of Medford classifies Hilton Road. The range is 1,500 to 3,000. As Table 3.8-2 indicates, the visual impact of the SD Alternative in LU 4, which contains the EJ Area 3, would be average, and the visual impact of the DI Alternative would be low.

As shown in Figure 3.4-4, the DI Alternative would result in residential displacements. The displacements would include 24 dwelling units in the multifamily complex on the north side of Hilton Road and one single-family residence on the south side of Hilton Road. These are not considered to impact an EJ group for several reasons. First, according to the 2010 Census, 16 percent of the population in the census block containing the six 4-plexes on the north side of Hilton Road was minority. This is equal to the Jackson County average of 16 percent. Fourteen percent of the population of the census block on the south side of Hilton Road was minority. While 31 percent of the households in census tract 4.06, block group 1, which includes the displaced residences, were low income, none of the occupants of the multifamily complex on the north side of Hilton Road has a Section 8 voucher. Section 8 vouchers can indicate low-income status. A windshield survey gives no indication that the household that occupies the displaced single-family residence on the south side of Hilton Road is low income.

#### *EJ Area 4 (Figure 3.4-5)*

The impacts of the build alternatives on EJ Area 4 would be limited. Traffic volumes on Whittle Avenue, which is located within the EJ Area, would be lower than under the No Build Alternative. As Table 3.8-2 indicates, the visual impact of the SD Alternative in LU 4, which contains the residences in EJ Area 4, would be average, and the visual impact of the DI Alternative would be low.

 $<sup>^{\</sup>rm 2}$  Southern Oregon Transportation Engineering, LLC, July 7, 2012.

#### *EJ Area 5 (Figure 3.4-5)*

The impacts of the build alternatives on EJ Area 5 would be limited. Traffic on Skypark Drive, which is located within EJ Area 5, is forecast to be lower under the SD Alternative than under the No Build Alternative and to be about the same as the No Build Alternative under the DI Alternative. As Table 3.8-2 indicates, the visual impact of the SD Alternative in LU 4, which contains the residences in EJ Area 5, would be average, and the visual impact of the DI Alternative would be low.

#### *EJ Area 6 (Figure 3.4-5)*

The impacts of the build alternatives on EJ Area 6 would be limited. Traffic volumes on Crater Lake Avenue, which is located within EJ Area 6, are forecast to be lower than under the No Build Alternative under both build alternatives. The visual impact of the SD Alternative in LU 4, which contains the residences in EJ Area 6, would be average, and the visual impact of the DI Alternative would be low.

#### *EJ Area 9 (Figure 3.4-7)*

The impacts of the build alternatives on EJ Area 9 would be limited. The visual impact of the build alternatives in LU 9, which contains the residences in EJ Area 9, would be very low. Local access to existing OR 62 would change. The intersections of Gregory Road and Gramercy Drive with existing OR 62 would be eliminated. Access to existing OR 62 for affected residents would shift to Corey Road to the south and Merry Lane to the north. Because of their proximity to the Agate Road Interchange, the residents of EJ Area 9 would experience construction impacts. These would include disruptions to travel, as described in Section 3.1.3.2, noise impacts described in Section 3.17.3.2, and air quality impacts, as described in Section 3.16.3.3. The distance between the new interchange and the residences of EJ Area 9 would reduce the level of these impacts.

Because of design changes that have occurred since the publication of the DEIS, access under the Preferred Alternative to existing OR 62 for residents of EJ Area 9 has changed. Corey Road will connect to Crater Lake Avenue, but will not connect to existing OR 62. Fowler Lane will connect to both Crater Lake Avenue and existing OR 62.

#### EJ Area 10 (Figure 3.4-8)

The impacts of the build alternatives on EJ Area 10 would be limited. As Table 3.8-2 indicates, the visual impact of the build alternatives in LU 12, which contains the residences in EJ Area 10, would be low. The build alternatives would not cause any noise impacts or displacements in EJ Area 10. The build alternatives are not expected to noticeably affect traffic volumes on Avenue A or Antelope Road.

#### *EJ Area 11 (Figure 3.4-8)*

The impacts of the build alternatives on EJ Area 11 would be limited. As Table 3.8-2 indicates, the visual impact of the build alternatives in LU 6, which contains the residences in EJ Area 11, would be average. The build alternatives would not cause any noise impacts or displacements in EJ Area 11. While the build alternatives would increase traffic volumes on existing OR 62 in EJ Area 11, the residences in EJ Area 11 do not front on existing OR 62.

# EJ Area 12 (Figure 3.4-8)

The build alternatives are not expected to noticeably affect traffic volumes on Avenues G or H, which are located within EJ Area 12. Some of EJ Area 12 is in LU 6 and some is in LU 12. As Table 3.8-2 indicates, the visual impact of the build alternatives in LU 6, which includes the residences in census block 2023, would be average, and the visual impact in LU 12, which includes census blocks 2029 and 2028, would be low.

## EJ Area 13 (Figure 3.4-8)

The impacts of the build alternatives on EJ Area 13 would be limited. The only impact of the build alternatives on EJ Area 13 would be visual. As Table 3.8-2 indicates, the visual impact of the build alternatives on LU 13, which contains EJ Area 13 and consists of the VA SORCC, would be moderately high.

#### **EJ Areas For Which Some Impacts Would Be High**

This part of the analysis describes the impacts of the build alternatives on EJ Areas 7, 8, and 14, where, unlike in EJ Areas 1 to 6 and 9 to 13, some impacts would be high. Section 3.4.3.2 below addresses whether the impacts in EJ Areas 7 and 8 qualify as high and disproportionate under FHWA policy.

#### *EJ Area 7 (Figure 3.4-6)*

The build alternatives would have substantial impacts on EJ Area 7. The build alternatives would displace five residences and cause noise impacts at two dwellings. As Table 3.8-2 indicates, the visual impacts of the build alternatives on LU 7, in which EJ Area 7 is located, would be moderately high. Because the area is predominantly industrial, there would be no impacts on community cohesion. Because of proximity to the construction of the bypass, Vilas Road Interchange, and improvements to Vilas Road, the residents of EJ Area 7 would experience the construction noise impacts as described in Section 3.17.3.2. For the same reason, EJ Area 7 would experience the potential impacts of project construction on air quality described in Section 3.16.3.3.

#### *EJ Area 8 (Figure 3.4-6)*

The build alternatives would have substantial impacts on EJ Area 8. Design Options A and B would displace four dwellings and Design Option C would displace three dwellings. Design Options A and B would have noise impacts at four dwellings and Design Option C would have noise impacts at seven dwellings. Portions of EJ Area 8 are located in LU 7 and portions are located in LU 8. As Table 3.8-2 indicates, the visual impacts at residences in LU 7 would be moderately high. The visual impact at residences in LU 8 would range from average to high, depending on distance to the bypass. (While Table 3.8-3 indicates that the visual impacts in LU 8 would vary by design option, the ratings apply to the bypass north of EJ Area 8. In EJ Area 8, the bypass alignment under the design options is the same or close to the same.) By terminating Justice Road on both sides of the bypass, the build alternatives would also sever the direct connection to existing OR 62 from the residences west of the bypass and separate the residences on either side of the bypass. See the discussion of community cohesion impacts in Section 3.5.3. Because of proximity to the construction of the bypass and improvements to Vilas Road, the residents of EJ Area 8 would experience the construction noise impacts described in Section 3.17.3.2. For the same reason, EJ Area 8 would experience the potential impacts of project construction on air quality described in Section 3.16.3.3.

#### *EJ Area 14 (Figure 3.4-8)*

The visual impacts of the build alternatives on EJ Area 14 would be substantial. As Table 3.8-2 indicates, the visual impact of the build alternatives on LU 14, which includes EJ Area 14, would be high. While the build alternatives would remove the existing Dutton Road access to some of the residences in EJ Area 13, they would replace the existing access with access across the bypass that would be very similar to the existing access.

#### **JTA Phase**

The JTA phase would have adverse impacts only in EJ Areas 7, 8, and 9; it would not have adverse impacts in the other EJ areas. As with the build alternatives, the impacts of the JTA phase in this list would be the same or similar for the residents of EJ Areas 7, 8, and 9.

- When traveling through the project area, the residents of all the EJ areas addressed below would experience the benefits of the build alternatives described in Section 3.1.3.2, including reduced congestion and travel time, shorter traffic queues at intersections, fewer intersections and driveways blocked by traffic queues, and lower crash rates.
- As stated in Section 3.16.3.1, the project would not cause or contribute to any
  new violations of any air quality standard or increase the frequency or severity
  of any existing violation or any standard. Therefore, this section does not further
  address impacts on air quality. Section 3.16 of this chapter provides additional detail
  regarding the air quality analysis for this project.

As described below, the JTA phase would have some of the impacts in EJ Areas 7, 8, and 9 that the build alternatives would have, but the impacts from the JTA phase would be smaller in scale than the impacts of the build alternatives.

#### EJ Area 7

Figure 3.4-9 shows EJ Area 7. Like the build alternatives, the JTA phase would cause noise impacts at two dwellings. However, unlike the build alternatives, the JTA phase would not displace any residences. As Table 3.8-2 indicates that in LU 7, in which EJ Area 7 is located, the visual impacts of the build alternatives would be average. Because the area is predominantly industrial, there would be no impacts on community cohesion. Because of proximity to the construction of the bypass, the residents of EJ Area 7 would experience the construction noise impacts described in Section 3.17.3.2. For the same reason, EJ Area 7 would experience the potential impacts of project construction on air quality described in Section 3.16.3.3.

#### EJ Area 8

Figure 3.4-9 shows EJ Area 8. Under all three design options, the JTA phase would displace three dwellings and have noise impacts at three dwellings in EJ Area 8. Portions of EJ Area 8 are located in LU 7 and portions are located in LU 8. As Table 3.8-2 indicates, the visual impacts at residences in LU 7 would be average. The visual impact at residences in LU 8 would range from average to high, depending on distance to the bypass. (While Table 3.8-3 indicates that the visual impacts in LU 8 would vary by design option, the ratings apply to the bypass north of EJ Area 8. In EJ Area 8, the bypass alignment under the design options is the same or close to the same.) By terminating Justice Road on both sides of the bypass, the JTA phase would also sever the direct connection to existing OR 62 from the residences west of the bypass and separate the residences on either side of the bypass. See the discussion of community cohesion impacts in Section 3.5.3. Because of proximity to the construction of the bypass, the residents of EJ Area 8 would experience the construction noise impacts as described in Section 3.17.3.2. For the same reason, EJ Area 8 would experience the potential impacts of project construction on air quality described in Section 3.16.3.3.

#### EJ Area 9

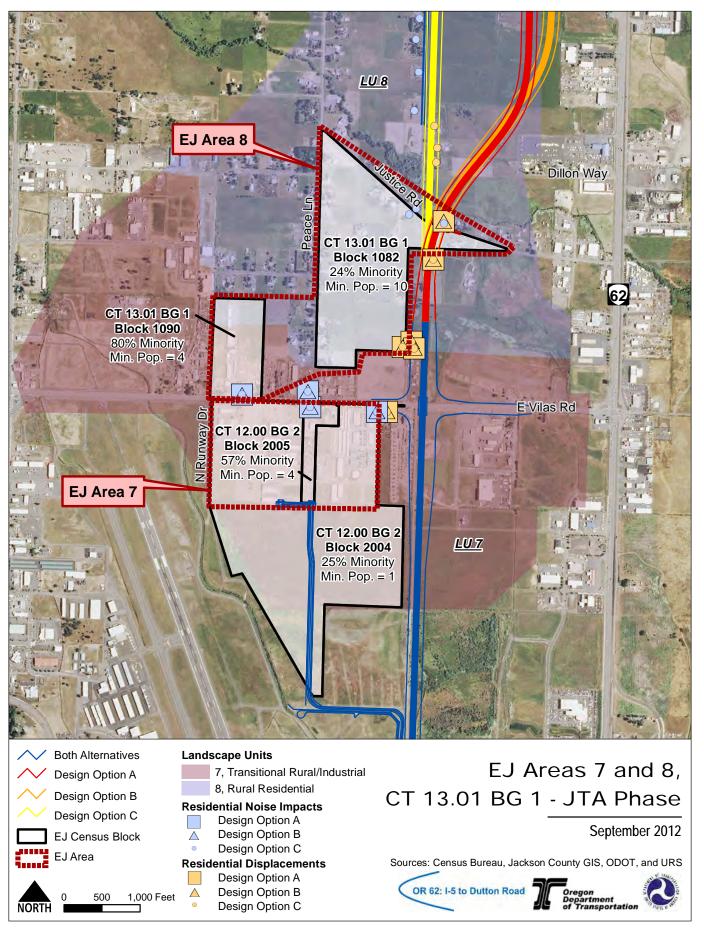
Figure 3.4-10 shows EJ Area 9. The JTA phase would cause no noise impacts or displacements in EJ Area 9. The visual impact of the build alternatives in LU 9, which contains the residences in EJ Area 9, would be very low. Local access to existing OR 62 would change. The intersections of Gregory Road and Gramercy Drive with existing OR 62 would be eliminated. Access to existing OR 62 for affected residents would shift to Corey Road to the south and Merry Lane to the north. Because the JTA phase does not include the Agate Road Interchange, the residents of EJ Area 9 would not experience the construction impacts the build alternatives would cause.

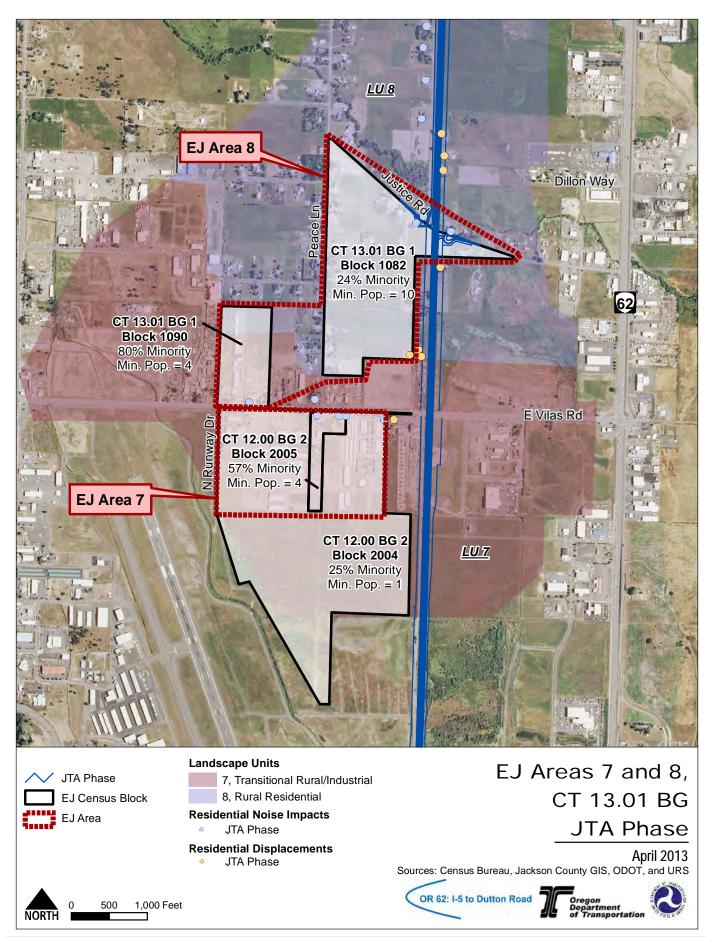
Because of design changes that have occurred since the publication of the DEIS, access under the JTA phase to existing OR 62 for residents of EJ Area 9 has changed. Corey Road will connect to Crater Lake Avenue, but will not connect to existing OR 62. Fowler Lane will connect to both Crater Lake Avenue and existing OR 62.

# **3.4.3.2 Disproportionately High and Adverse Impacts**

It is FHWA policy that "a disproportionately high and adverse effect on a minority or low income population means the adverse effect is predominantly borne by such population or is appreciably more severe or greater in magnitude on the minority or low-income population than the adverse effect suffered by the non-minority or non-low-income population." (FHWA 2011)

**Figure 3.4-9** 





**Figure 3.4-10** 

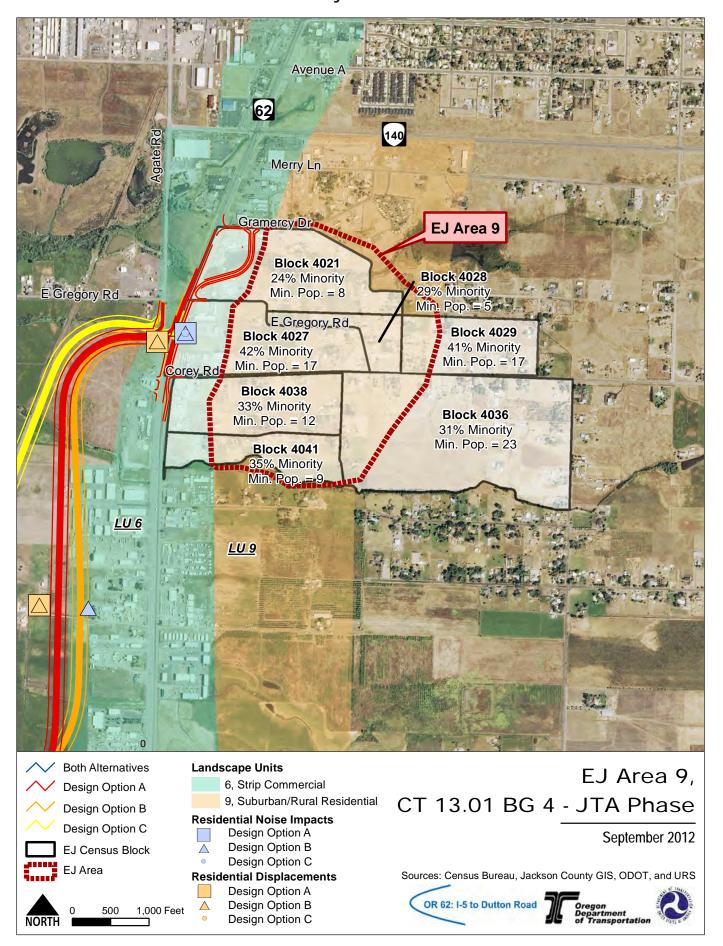
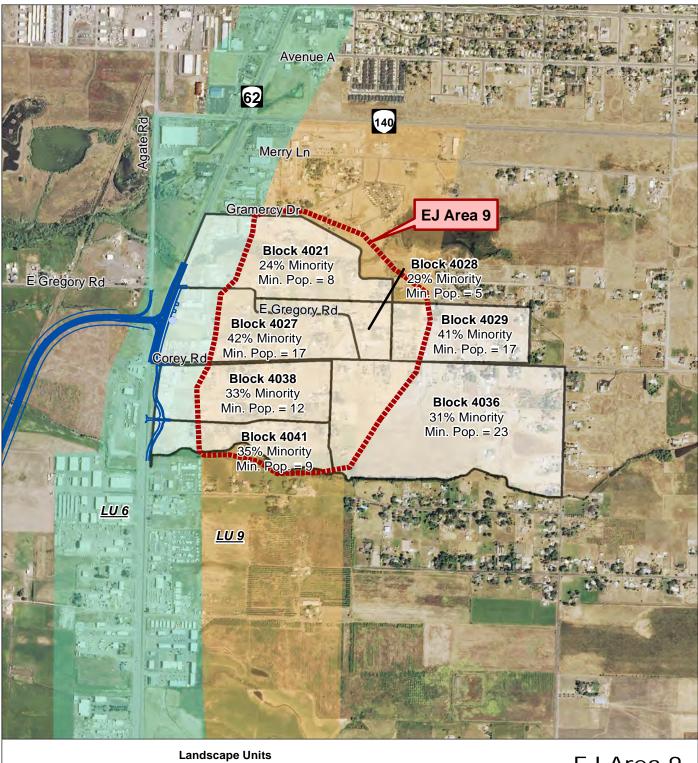


Figure 3.4-10 FEIS





NORTH

6, Strip Commercial

9, Suburban/Rural Residential

#### **Residential Noise Impacts**

JTA Phase

#### **Residential Displacements**

JTA Phase

EJ Area 9, CT 13.01 BG 4

JTA Phase

April 2013

Sources: Census Bureau, Jackson County GIS, ODOT, and URS



#### **Build Alternatives**

Based on the above discussion and analysis, and for the reasons stated below, the build alternatives would not cause disproportionately high and adverse effects on any minority or low-income populations in accordance with the provisions of E.O. 12898 and FHWA Order 6640.23A. Therefore, no further EJ analysis is required. Following is a summary of the results of the EJ analysis that support this conclusion for the build alternatives.

- EJ Areas would receive similar levels of benefits from the build alternatives (reduced congestion, reduced traffic volumes on local streets, improved roadway safety, etc.) that the non-EJ areas would receive.
- Neither of the build alternatives would cause more displacements of minority or low-income households than of other households. Of the 45 residential displacements under the DI Alternative with Design Options A or B and 46 residential displacements with Design Option C, as listed in Table 3.3-2, only nine displacements would be in the EJ areas described above with residential displacements, i.e., in EJ Areas 7 and 8. Of the 19 residential displacements under the SD Alternative with Design Option A and 20 residential displacements under Design Option B, nine would be in these EJ areas. Of the 21 residential displacements under the SD Alternative with Design Option C, eight would be in the EJ areas. All other displacements would be in non-EJ areas.

Since the DEIS was published, residential displacements have been reevaluated based on the current design and current conditions. The Preferred Alternative will displace 18 residences, three of those are in EJ Areas 7 and 8.

- Neither of the build alternatives would cause more noise impact at minority or low-income residences than at other residences. Of the 13 residential noise impacts under the SD Alternative and 14 residential noise impacts under the DI Alternative with Design Options A and B, as listed in Table 3.17-3, seven would be in the EJ areas described above with noise impacts, i.e., in EJ Areas 7 and 8. Of the 19 residential noise impacts under the SD Alternative and 20 residential noise impacts under the DI Alternative with Design Option C, as listed in Table 3.17-3, ten would be in these EJ areas. All other residential noise impacts would be in non-EJ areas.
- While the visual impact of the build alternatives on residences close to the bypass alignment under the build alternatives in EJ Areas 7 and 8 and on residences in EJ Area 14 would be high, as Figure 3.8-1 shows, there are larger numbers of residences outside EJ Areas 7, 8, located close to the alignment and outside EJ Area 14 which would experience high visual impacts.
- Residents outside EJ Areas 7 and 8 would experience the construction impacts
  referred to in the assessment impacts on them above. Similarly, the loss of
  direct access to existing OR 62 via Justice Road would be experienced by other
  residents of the Peace/Justice neighborhood to the north and west of EJ Area
  8.

#### **JTA Phase**

Based on the above discussion and analysis, and for the reasons stated below, the JTA phase would not cause disproportionately high and adverse effects on any minority or low-income populations in accordance with the provisions of E.O. 12898 and FHWA Order 6640.23A. No further EJ analysis is required.

 The JTA phase would not cause more displacements of minority or low-income households than of other households. Of the 11 residential displacements under the JTA phase, regardless of design option, three would be in the EJ Area 8, the only EJ area assessed above with residential displacements.

Since the DEIS was published, residential displacements have been reevaluated based on the current design and current conditions. The JTA Phase will displace four residences. Of those four displacements, one is in EJ Area 8. The JTA phase would not cause noise impacts to be predominantly borne by minority or low-income residents. Of the nine residential noise impacts under Design Options A, ten residential noise impacts under Design Option B, and 19 residential noise impacts under Design Option C, as listed in Table 3.17-6, five would be in the EJ areas described above with noise impacts, i.e., in EJ Areas 7 and 8.

The JTA phase would not cause noise impacts to be predominantly borne by minority or low-income residents. Of the 11 residential noise impacts under Design Option A, 12 residential noise impacts under Design Option B, as listed in Table 3.17-3, five would be in the EJ areas described above with noise impacts, i.e., in EJ Areas 7 and 8. Of the 21 residential noise impacts under Design Option C, ten would be in EJ areas.

- While the visual impact of the build alternatives on residences close to the bypass alignment under the build alternatives in EJ Area 8 would be high, as Figure 3.8-1 shows, there are larger numbers of residences outside EJ Area 8 located close to the alignment, and which therefore, would experience high visual impacts.
- Residents outside EJ Areas 7 and 8 would experience the construction impacts referred to in the assessment impacts on them above. Similarly, the loss of direct access to existing OR 62 via Justice Road would be experienced by other residents of the Peace/Justice neighborhood to the north and west of EJ Area

# 3.4.4 Avoidance, Minimization, and/or **Mitigation Measures**

Because neither the build alternatives nor the JTA phase would cause disproportionately high and adverse effects on any minority or low-income populations, there is no need for measures to avoid, minimize, or mitigate impacts.

Sections 3.5, 3.8, 3.16, and 3.17 describe measures to avoid, minimize, or mitigate the socioeconomic, visual, air quality, and noise impacts of project alternatives. These measures would benefit EJ populations, as well as non-EJ populations.

#### **Section 3.5 Content**

- 3.5.1 Regulatory Setting
- 3.5.2 Affected Environment
- 3.5.3 Environmental Consequences: Community Character and Cohesion
- 3.5.4 Avoidance, Minimization, and/or Mitigation Measures: Community Character and Cohesion
- 3.5.5 Environmental Consequences: Community Facilities
- 3.5.6 Avoidance, Minimization, and/or Mitigation Measures: Community Facilities
- 3.5.7 Environmental Consequences: Businesses and Established Business
  Districts
- 3.5.8 Avoidance, Minimization, and Mitigation: Businesses and Established Business Districts
- 3.5.9 Environmental Consequences: General and Particular Social Groups
- 3.5.10 Avoidance, Minimization, and Mitigation: General and Particular Social Groups
- 3.5.11 Environmental Consequences: Local, Regional, and State Economy
- 3.5.12 Avoidance, Minimization, and/or Mitigation: Local, Regional, and State Economy
- 3.5.13 Avoidance, Minimization, and/or Mitigation Commitments Incorporated Into the Preferred Alternative

# 3.5 Socioeconomic Analysis

The socioeconomics analysis covers impacts on community character and cohesion, community facilities, businesses and established business districts, impacts on populations over age 65 or disabled, and impacts on the local economy.

# 3.5.1 Regulatory Setting

NEPA established that the federal government use all practicable means to ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 U.S.C. 4331[b][2]). The FHWA, in its implementation of NEPA (23 U.S.C. 109[h]),]), directs that final decisions regarding projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts, such as, destruction or disruption of humanmade resources, community cohesion, and the availability of public facilities and services.

The framework provided by EO 12898 on EJ, the U.S. DOT Order (5610.2a), and FHWA Order 6640.23A addresses only minority populations and low-income populations. However, concentrations of the elderly, children, disabled, and other populations protected by Title VI of the Civil Rights Act of 1964 and related nondiscrimination statutes will also be discussed.

This document addresses all impacts (to the human and natural environments), and describes any mitigating protections or benefits that would be provided by federal or state law, or as part of the action. In particular, the Age Discrimination Act of 1975, as amended (42 U.S.C. 6101 et seq.), prohibits discrimination on the basis of age in programs receiving federal financial assistance, and Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794 and 49 C.F.R. Part 27.7) protects handicapped persons.

Sources for social and economic data included the Federal Bureau of Economic Analysis, the U.S. Census Bureau, the Oregon Employment Department, the Oregon Office of Economic Analysis, the Portland State University Population Research Center, and local jurisdictions, agencies, and chambers of commerce.

#### SOCIOECONOMIC

3.5

For further information regarding socioeconomic impacts, including citations to source documents, refer to the *OR 62 Corridor Solutions Project Socioeconomics Technical Report*, July 2011. This report is available from the ODOT contact person identified on page i of this EIS.

## 3.5.2 Affected Environment

# 3.5.2.1 Project Area Description

The City of Medford is the business, commercial, and professional center of Jackson County in southern Oregon. The project area for the socioeconomic analysis varies because it includes several distinct categories of impacts but is roughly bounded on the west by Table Rock Road, on the east by Foothill Road, on the north the boundary is just north of Dutton Road, and on the south by the intersection of I-5 and OR 62 (see Figure 1-1). The southern portion of the project is located within the City of Medford. The rest of the project is within unincorporated Jackson County, including the designated urban unincorporated community of White City at the north end of the project area.

#### **Community Features**

### **Neighborhoods and Community Character**

The general character of the community in the immediate vicinity of the project is described as follows:

- Primarily commercial in the southern portion, with some high density housing located behind businesses on the south side of existing OR 62 in the vicinity of Poplar Drive and Delta Waters Road;
- A mix of low-density industrial, commercial, and rural residential in the middle portion, outside of and within the fringes of the Medford UGB and the White City UUCB:
- · Industrial areas along Agate Road in White City; and
- · Rural areas north of White City.

Generally, in the southern portion of the project area within the Medford city limits, existing OR 62 is a commercial corridor. The area between I-5 and Coker Butte Road is an important business district for the Rogue Valley, with several big box stores, shopping centers, offices, restaurants, and other service businesses. Medford Airport is located to the north and west of this area. East of this commercial core, within the Medford city limits, are medium density residential neighborhoods.

North of Coker Butte Road, the community is more rural in character with a mix of commercial and industrial uses located along existing OR 62 and rural residential areas located behind them. The Peace/Justice neighborhood is located west of existing OR 62 and north of Vilas Road, in the vicinity of the proposed bypass near Justice Road, as described in Section 3.4.3.1. About 75 rural homes currently exist in this area. This rural area forms a cohesive community due to the proximity of the homes and the distance between this group of rural homes and other residential communities. Justice Road currently serves as a direct connection between this neighborhood and existing OR 62.

In White City, the proposed bypass would travel along Agate Road in the western portion of the community, which is dominated by industrial areas. Existing OR 62 through White City is a commercial corridor. Urban density residential neighborhoods are located to the east of existing OR 62 in White City.

## **Community Facilities and Public Services**

Jackson County and the City of Medford provide general government services, emergency services, and law enforcement to residents and businesses near the project. Community facilities located within one mile of the project, including schools, parks, libraries, hospitals and churches or places of worship, are shown on Figure 3.5-1.

Medford Fire and Rescue, which serves the portion of the project area south of approximately Vilas Road, has one station located less than 0.5 miles west of the southern terminus of the project and one station located less than one mile east of the southern terminus. Jackson County Fire District No. 3 serves the northern part of the project area. There is one District No. 3 station, the White City Station, located along the project alignment at Agate Road and Avenue G.

**Figure 3.5-1** 

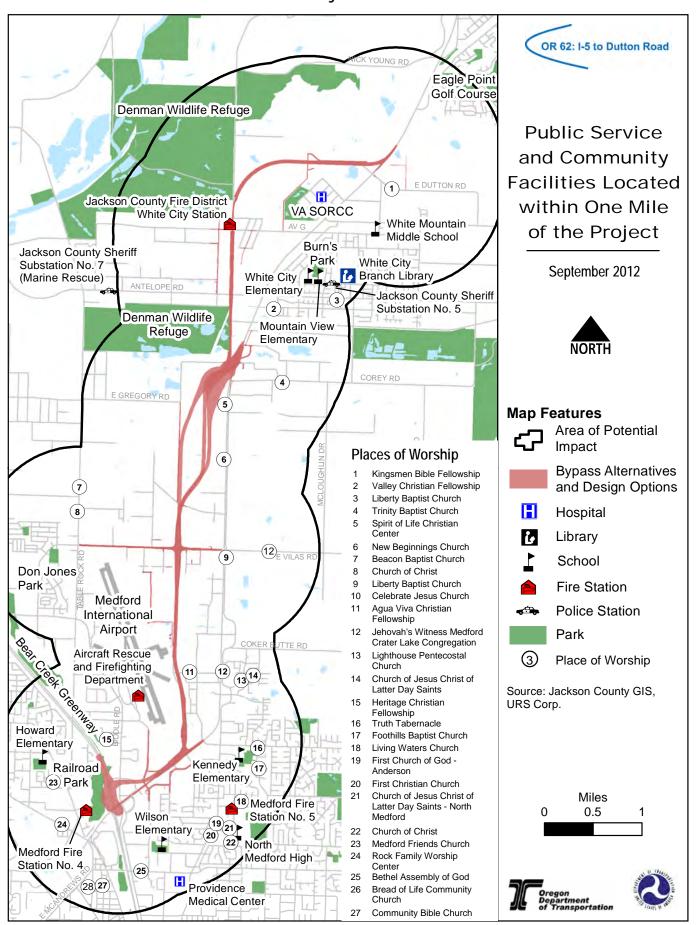
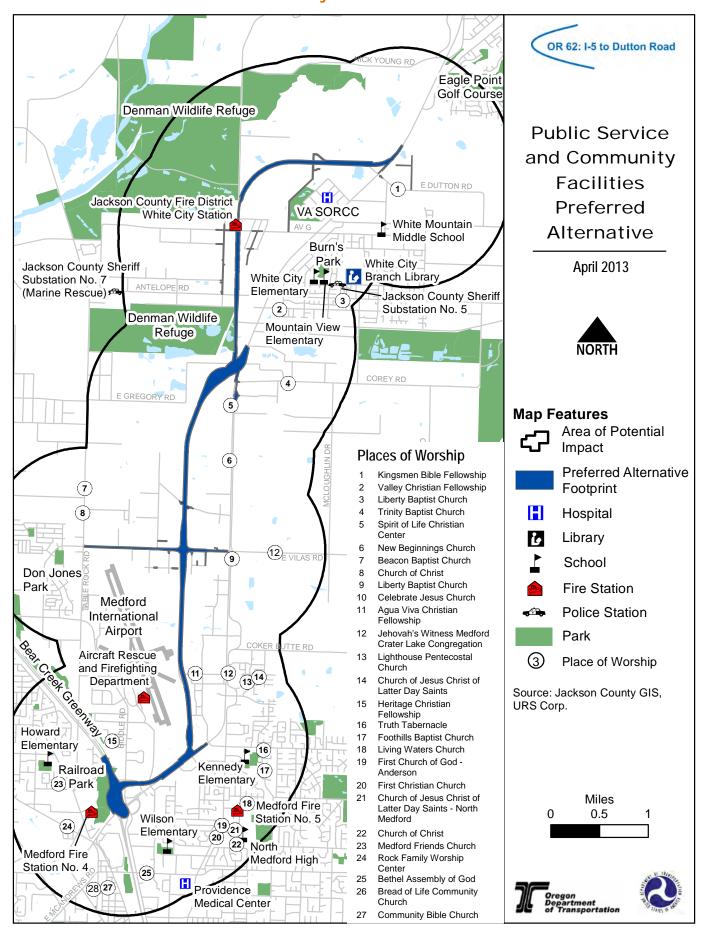


Figure 3.5-1 FEIS



The project area is within the jurisdiction of the Oregon State Police (OSP), the Jackson County Sheriff's Department, and the City of Medford Police Department. OSP is responsible for traffic safety and response to emergency calls for service on OR 62. The Sheriff's Office provides law enforcement services to unincorporated areas north of Vilas Road. Substation No. 5 and Substation No. 7 (Marine Rescue) are both in White City and within one mile of the project. The Medford Police Department provides law enforcement services to the area south of Vilas Road.

There are seven public schools located within one mile of the project. These schools are within the boundaries of three school districts, Medford School District No. 549C, Central Point School District No. 6, and Eagle Point School District No. 9.

Jackson County Parks and Recreation operates 18 developed parks. The county park closest to the project is the Jackson County Sports Park, located approximately 3 miles east of the northern terminus of the project area. Medford area parks or recreational facilities near the project include Railroad Park, the Bear Creek Greenway, the Denman Wildlife Area, and Eagle Point Golf Course.

The Jackson County Library operates three branches within a mile of the project, including Headquarters, Central Point Branch, and White City Branch. Hospitals in the Medford area include Providence Medford Medical Center, Rogue Valley Medical Center, and the Surgery Center of Southern Oregon LLC. The VA SORCC is located near the northern terminus of the project in White City. Several churches or places of worship are located within one mile of the project and are shown on Figure 3.5-1.

#### **Established Business Districts**

The OR 62 and I-5 interchange area from just east of I-5 and continuing north along OR 62 is one of the three major commercial districts within Medford. Sixteen buildings in the southern portion of the project area have more than 30,000 square feet of floor area, which is the City of Medford's standard for a "big box." Two large shopping centers exist in this area, Fred Meyer and Poplar Square.

Several big box stores are located in or adjacent to the Crater Lake Plaza shopping center in the area between Delta Waters Road and Commerce Drive. In addition, many small or moderate-sized strip malls, shopping centers, and other businesses are located in this area and are highly accessible from both OR 62 and I-5.

A number of the businesses in this area would be considered "pass-by" businesses, meaning that a substantial portion of their customers would stop because they are passing by rather than seeking out the business as a destination. Businesses such as fast food restaurants, gas stations, and motels fall into this category. These types of businesses are much more dependent on convenient access than destination businesses.

Commercial businesses along OR 62 in White City also could be considered an established district. Many pass-by businesses are located here. The VA SORCC is on the west side of OR 62 near Avenue H and has a staff of about 400, providing medical care to about 9,000 veterans in Southern Oregon and Northern California.

## **Demographic and Economic Trends**

## **Population and Households**

The Jackson County population was 203,206 in 2010 (Table 3.5-1). The City of Medford, the county seat, is home to 37 percent of Jackson County residents. Another 10 percent live in the City of Ashland. Twenty-nine percent of the Jackson County population lives in unincorporated areas, including White City, which is an urban unincorporated community.

In the 1990s, the Jackson County population grew by approximately 2.2 percent on average per year, faster than the population growth rate of the State of Oregon. Much of Jackson County's growth occurred in Medford, which grew at 3.0 percent annually. Population growth in Jackson County slowed somewhat from 2000 to 2005, though White City experienced rapid growth of approximately six percent per year (Table 3.5-1). Population growth in Jackson County slowed even more

from 2005 to 2010, to less than one percent annually. Population growth in White City also slowed from 2005 to 2010.

The State of Oregon Office of Economic Analysis and Jackson County expect population growth rates for Oregon, Jackson County, and Medford to increase in the period 2010 to 2025/2026, then slow over the next 15 years, as shown in Table 3.5-1.

**Table 3.5-1 Population Trends** 

Year/Measure	State of Oregon	Jackson County	City of Medford	White City
1990	2,842,321	146,389	46,951	5,891
2000	3,421,399	181,269	63,154	5,466
2005	3,628,700	194,515	70,855	7,500
2010	3,831,074	203,206	74,907	7,975
AARG, <sup>1</sup> 1990-2000	1.87%	2.16%	3.01%	-0.75%
AARG,1 2000-2005	1.18%	1.42%	2.33%	6.53%
AARG, <sup>1</sup> 2005-2010	1.09%	0.88%	1.12%	1.24%
Projected. 2025/2026 <sup>2</sup>	4,626,015	264,419	111,025	11,424
Projected. 2040	5,425,408	306,421	133,397	13,090
AARG, <sup>1</sup> 2010-2025/2026 <sup>2</sup>	1.26%	1.66%	2.49%	2.27%
AARG, <sup>1</sup> 2025/2026-2040 <sup>2</sup>	1.07%	1.06%	1.32%	1.0%

Notes:

Source: JCCP, 2007; PRC, 2011; and 0EA, 2009.

#### **Other Population Subgroups**

Population subgroups not specifically covered under EJ include populations over age 65 and the disabled. Generally, the Census block groups encompassing the build alternatives have a lower percentage of population over age 65 (15 percent for the SD Alternative and 14 percent for the DI Alternative) than Jackson County (16 percent).

Census block groups encompassing the build alternatives have a higher percentage of disabled population (28 percent for the SD Alternative and 24 percent for the DI Alternative) than Jackson County (20 percent). Some of the reason for this higher percentage of disabled population could be due to the location of the VA SORCC in White City, which includes in-patient rehabilitation facilities. The disabled population percentage in White City is 25 percent, which is higher than Jackson County.

#### **Household Income**

In 2010, median household income for the City of Medford and Jackson County were 87 percent and 89 percent of the median household income for Oregon for the same year, as shown in Table 3.5-2. Percent of households below the poverty line was higher for Medford (15.7 percent) than Jackson County and the state as a whole (both 14.0 percent).

White City had a median household income of 87 percent of the statewide median household income for the same year. The percent population living in poverty in White City in 2010 was nearly double the statewide average at 26.4 percent.

These results indicate that the project is located in an area with relatively more poverty and lower incomes when compared to certain other areas of Oregon. These results are consistent with the high number of jobs in the retail trade industry, which tend to have lower wages when compared to other types of jobs.

<sup>&</sup>lt;sup>1</sup>AARG = Annual Average Rate of Growth.

<sup>&</sup>lt;sup>2</sup>Available projections include 2025 projections for Oregon and 2026 projections for other areas.

Table 3.5-2 Median Household Income and Poverty Statistics (2010)

	Median Household Income	Percent of Residents Living Below Poverty Level
White City	\$42,694	26.4
City of Medford	\$42,745	15.7
Jackson County	\$44,142	14.0
State of Oregon	\$49,260	14.0

Source: U.S. Census 2010a, U.S. 2010b

#### Housing

Housing characteristics were examined using Census data, local real estate listings, and rental market information. The vacancy rate in 2010 was relatively low in Medford at 7.2 percent and relatively high in White City at 19.4 percent (U.S. Census 2010c). The statewide housing vacancy rate was slightly higher at 9.3 percent. More detail on the housing market and housing availability may be found in the OR 62 Right-of-Way Technical Report. This report is available from the ODOT contact person identified on page i of this EIS.

#### **Property Values and Tax Base**

The City of Medford and Jackson County budgets were examined for property value and tax base information. Assessed value of private property was \$5.917 billion in the City of Medford in 2010 with a tax rate of \$5.2953 per \$1,000 of assessed value (Jackson County Assessor 2011). The City of Medford's resulting property tax revenue from the Adopted Biennium 2009/11 budget was approximately \$57.8 million (Medford, City of 2011). This represents 59 percent of Medford's total general fund revenues for the 2009/11 biennium.

The assessed value of private property in Jackson County was \$16.251 billion in 2010 (Jackson County Assessor 2011) with a tax rate of \$2.0099 per \$1,000 assessed value (Jackson County 2011c). The resulting Jackson County property tax revenue from the 2010/2011 Adopted Budget was approximately \$33.2 million (Jackson County 2011c). This represents approximately ten percent of Jackson County's total budget for the 2010/11 biennium of \$335.9 million.

#### **Employment and Industry**

Data on employment growth and unemployment rates in Jackson County and the State of Oregon were gathered from the Oregon Employment Department. Employment in Jackson County grew rapidly with the high population growth during the 1990s. Average annual employment growth rates in Jackson County decreased from 2.4 percent during the 1990s to 1.8 percent during the period 2000 to 2005, as shown in Table 3.5-3. Due to the recession of the economy nationally in 2008, Jackson County employment shrank by 0.8 percent per year for the period 2005 to 2010. Jackson County employment grew faster than statewide employment during the years 1990 to 2005. For the period 2005 to 2010, when the County experienced a reduction in employment, the State of Oregon growth rate was 0.3 percent, as shown in Table 3.5-3.

Table 3.5-3 Jackson County Employment Compared to State of Oregon Employment

	Employment	Average Unemployment Rate				
Jackson County						
1990	69,100	6.5%				
2000	85,500	5.6%				
2005	93,100	6.2%				
2010	89,600	12.6%				
AARG, 1990-2000	2.4%	-				
AARG, 2000-2005	1.8%	-				
AARG, 2005-2010	-0.8%	-				
State of Oregon						
1990	1,424,900	5.4%				
2000	1,717,000	5.1%				
2005	1,741,000	6.2%				
2010	1,769,600	10.8%				
AARG, 1990-2000	2.0%	-				
AARG, 2000-2005	0.3%	-				
AARG, 2005-2010	0.3%	-				

Notes:

AARG = Average Annual Rate of Growth Source: Oregon Employment Department, 2011a.

The unemployment rate was higher in Jackson County than in the state overall in 1990 and 2000, though the two rates were the same in 2005. Due to the 2008 economic recession, both rates climbed in 2010. The Jackson County unemployment rate was 12.6 percent in 2010, compared to 10.8 percent for the state, as shown in Table 3.5-3.

Despite the slowdown in employment growth due to the recession, it would be reasonable to expect that the overall trend in employment growth during the period prior to the recession would continue in the long-term.

The Jackson County economy is heavily dependent on retail trade. The trade, transportation, and utilities economic sector makes up 23 percent of the employment in Jackson County (OED 2011b and c). Seventy-two percent of the employment in this sector is in retail trade. Other sectors that make up a high proportion of Jackson County employment include educational and health services, government, and leisure and hospitality.

Jackson County has fewer government employees as a percentage of total employment when compared to the state as a whole, and fewer jobs in manufacturing, financial activities, and professional business services (OED 2011b).

# 3.5.3 Environmental Consequences: **Community Character and Cohesion**

#### **Build Alternatives and JTA Phase**

Generally shorter travel times in the project area, improved intersection operations, and enhanced local mobility would result in improved connections among neighborhoods. Safety improvements, sidewalks, and bicycle lanes would enhance non-motorized travel among neighborhoods in the project area.

One localized community cohesion impact would occur in the vicinity of Justice Road and would be the same for both build alternatives and the JTA phase. The build alternatives and JTA phase would sever Justice Road in this area. This would separate six to eight residences east of the bypass from the rest of the neighborhood, depending on the design option. Residents on the east side of the bypass would have access to existing OR 62 via Justice Road. Residents west of the bypass would access existing OR 62 or the bypass via Justice Road, Peace Lane, and Vilas Road.

With any of the design options, 10 to 15 homes along Justice Road on either side of the bypass would be in close proximity to the bypass. This would result in changes in noise levels and in the visual environment at these homes. In addition, there are seven homes that are accessed via a County-owned lane along the Medco Haul Road alignment north of Justice Road. With any of the design options, this lane would be converted into the Justice/Gregory connector road described in Section 2.1.2. Design Options A and B would be located to the east of these seven homes (between approximately 200 feet and 1,500 feet away), changing the noise and visual environment. With Design Option C, the bypass would be located immediately east of the Justice/Gregory connector road, displacing three of the seven homes and resulting in a larger change to the noise and visual environment for the remaining four homes. For additional information, see Section 3.8, Visual Resources and 3.17, Noise.

With the Preferred Alternative, the Justice/Gregory connector road will not be constructed in order to reduce project costs. The bypass will be located immediately east of the County-owned lane along the Medco Haul Road alignment north of Justice Road. The three homes along the east side of this County-owned lane will be displaced.

# 3.5.4 Avoidance, Minimization, and/or Mitigation Measures: Community Character and Cohesion

The Justice/Gregory connector road referred to above would mitigate the loss of connectivity in the rural residential neighborhood caused by the bypass in the vicinity of Justice Road by providing a connection between Justice Road and Gregory Road.

The Justice/Gregory connector road will not be constructed under the Preferred Alternative. This will reduce the mitigation for loss of connectivity described above. The portion of Justice Road west of the bypass will be approached via Peace Lane and Vilas Road.

The other changes in this area related to community character and cohesion would be due to changes to the visual and noise environment. See Sections 3.8, Visual Resources, and 3.17, Noise, for further discussion of mitigation measures for these potential impacts. Noise abatement was not found to be reasonable and feasible for any of the identified noise impacts. Therefore no noise abatement measures are recommended.

Because the Justice/Gregory connector road will not be constructed under the Preferred Alternative, the visual and noise impacts to the homes that would be located along the proposed Justice/Gregory connector road will be slightly reduced.

# 3.5.5 Environmental Consequences: Community Facilities

#### **Build Alternatives**

The build alternatives would result in the following changes to community facilities or public services described above under Section 3.5.2.1 Project Area Description and shown on Figure 3.5-1.

Generally mobility and shorter travel times in the project area would result in improved connections among neighborhoods, public service locations, and community facilities. Safety improvements, sidewalks, and bicycle lanes would enhance non-motorized access to public services and community facilities. Improved mobility in the project area would also reduce vehicular travel times to major tourism and recreational areas, such as the Rogue River National Forest and Crater Lake National Park.

The access to the United States Citizenship and Immigration Services (USCIS) facility would change from its current location on Commerce Drive to a new local road running south from Airway Drive connecting from Vilas Road to the airport, as shown in Sheets 3 and 4 of Figure 2-4.

Due to the design refinements that have occurred for the FEIS, under the Preferred Alternative, the existing approach road to the USCIS facility will remain in its current location. The bypass will be constructed on an overcrossing at Commerce Drive and Commerce Drive will continue to provide an approach for the USCIS facility. With these changes, the new local roadway connecting to Airway Drive will not be constructed because it is no longer necessary.

Both build alternatives would result in permanent closure of a Denman Wildlife Area parking lot that currently connects directly to Agate Road. The parking lot would be relocated on the north side of the wildlife area, at the southern end of 11th Street, as shown in Figure 3.6-7. See Section 3.6 Parks, Recreational Facilities, and Wildlife Refuges for additional information.

The SD Alternative would remove approximately 3.75 acres of land from the Bear Creek Greenway, decreasing the amount of park and recreation space that is available for the community. This decrease in park area would not be expected to affect the use of the Greenway trail. The DI Alternative would not affect the Bear Creek Greenway. See Section 3.6 Parks, Recreational Facilities, and Wildlife Refuges for further details on the Bear Creek Greenway.

The DI Alternative would change traffic flow around the intersection of Poplar Drive and OR 62 as a result of grade separation at this intersection.

In the area where the design options differ, Design Option B would result in the displacement of the Spirit of Life Christian Center, located at 6475 Crater Lake Highway. The other design options would not displace this property.

There would be no access or parking changes to community facilities or public service locations. No substantial or permanent change in demand for public services (schools and recreational facilities) would occur due to the project.

# **Emergency Services and Response Times**

Jackson County Fire District White City Headquarters Station, located immediately adjacent to the bypass in the northwest quadrant of the Agate Road and Avenue G intersection in the build alternatives, would retain its access to Agate Road, but would not have a direct access to the bypass. The bypass would result in the closure of Agate Road to the south of the Jackson County Fire District White City Headquarters Station, resulting in changes to emergency response routes from this station.

Emergency response times from the Jackson County Fire District White City Headquarters Station and Medford Fire Station Number Four and Number Five were evaluated using a set of representative locations. These are shown in Figure 3.5-2. This set of locations was chosen based on areas that appeared would experience impacts to emergency response times as a result of the build alternatives. Therefore, this travel time evaluation represents a worst case scenario.

**Figure 3.5-2** OR 62: I-5 to Dutton Road NICK YOUNG RD Jackson County Location #1: 600 Block West Dutton Road Representative E DUTTON RD Jackson County Fire District White City Station **Emergency** Response Times Jackson County Location #2: Antelope Road and 11th Street Jackson County Location #3: Antelope Road and Atlantic Avenue September 2012 ANTELOPE RD Jackson County Location #5: 1500 Block East Gregory Road Jackson County Location #4: OR 62 and OR 140 COREY RD **Map Features** E GREGORY RD Jackson County Location #6: 2500 Block Corey Road Bypass Alternatives and Design Options Jackson County Location #7: Justice Road and Peace Lane Representative Location Served by **Jackson County Jackson County Location #8:** Fire District East Vilas Road and McLoughlin Drive Representative Location Medford Location #1: Industry Drive and Served by **Enterprise Drive** Medford Fire Medford Location #2: **Grumman Drive and Kingsley Drive** Department Fire Station COKER BUTTE RD City Limits Medford Location #3: Biddle Road and Lawnsdale Road Source: Jackson County GIS, URS Corp. Medford Location #4: 1500 Block Skypark Drive Miles Medford Fire 0.5 Station No. 5 Medford Fire NE PINE RD Station No. 4

Figure 3.5-2 FEIS OR 62: I-5 to Dutton Road NICK YOUNG RD. Jackson County Location #1: 600 Block West Dutton Road Representative **Emergency** Response Times E DUTTON RD Jackson County Fire District White City Station Preferred **Alternative** Jackson County Location #2: Antelope Road and 11th Street Jackson County Location #3: Antelope Road and Atlantic Avenue April 2013 ANTELOPE RD Jackson County Location #5: 1500 Block East Gregory Road Jackson County Location #4: OR 62 and OR 140 COREY RD **Map Features** E GREGORY RD Jackson County Location #6: **Preferred Alternative** 2500 Block Corey Road **Footprint** Jackson County Location #7: Justice Road and Peace Lane Representative Location Served by Jackson County Jackson County Location #8: East Vilas Road and McLoughlin Drive Fire District Representative E VILAS RE Location Medford Location #1: **Industry Drive and** Served by Enterprise Drive Medford Fire Medford Location #2: **Grumman Drive and Kingsley Drive** Department Fire Station City Limits Medford Location #3: Biddle Road and Lawnsdale Road Source: Jackson County GIS, URS Corp. Medford Location #4: 1500 Block Skypark Drive Miles Medford Fire 0.5 Station No. 5 Medford Fire Station No. 4

Table 3.5-4 summarizes the emergency response times from these fire stations to each of the representative locations under each alternative. For most locations, there would be little or no change. For the representative location on West Dutton Road, emergency response times from the Jackson County Fire District White City Headquarters Station would improve by one minute or so with the build alternatives compared to the No Build Alternative. This would be due to the new local connector between Avenue G and West Dutton Road to the west of existing OR 62. Emergency response time from the Jackson County Fire District White City Headquarters Station to other representative locations in White City would increase by between 0.1 and 1.3 minutes with the build alternatives compared to the No Build Alternative.

Table 3.5-4 Emergency Response Times from Area Fire Stations to Representative Locations (in minutes)

Locations (III Illinutes)								
Representative Location	No Build Alternative	SD Alternative (Preferred Alternative)	DI Alternative	JTA Phase				
From Jackson County Fire District White City Headquarters Station to:								
#1: 600 Block	3.5	2.2	2.2	3.5				
West Dutton Road								
#2: Antelope Road	1.1	1.8	1.8	1.1				
and 11th Street								
#3: Antelope Road	3.8	3.9	3.9	3.8				
and Atlantic Avenue								
#4: OR 62	1.5	2.8	2.8	1.5				
and OR 140								
#5: 1500 Block East Gregory Road	2.5	6.3	6.3	2.5				
#6: 2500 Block	2.7	6.0	6.0	5.1				
Corey Road								
#7: Justice Road	5.8	7.0	7.0	6.5				
and Peace Lane		6.0		4.5				
#8: East Vilas Road	ast Vilas Road 5.7		7.4	6.0				
and McLoughlin Drive								
From Medford Fire Station	Number 4 or Numl	er 5 to:						
#1: Industry Drive	5.5	5.5	5.5	5.5				
and Enterprise Drive								
#2: Grumman Drive	4.0	4.0	4.0	4.0				
and Kingsley Drive								
#3: Biddle Road	3.9	3.9	3.9	3.9				
and Lawnsdale Road								
#4: 1500 Block	2.2	2.2	2.2	2.2				
Skypark Drive								

#### Notes

For simplicity, these times were estimated based on an assumption of average speed for emergency response vehicles based on the speed limit for each roadway. Emergency response vehicles would not be subject to traffic signal and congestion delays. This is a general methodology meant for comparative purposes only.

Areas close to the intersection of East Gregory Road, Agate Road, and OR 62 would see increases in emergency response times. The emergency response times from the Jackson County Fire District White City Headquarters Station to the representative locations on East Gregory Road and Corey Road would increase up to three to four minutes with the build alternatives compared to the No Build Alternative. This would be due to limited connections from OR 62 to East Gregory Road or to Corey Road with the build alternatives, requiring vehicles coming from the Jackson County Fire District White City Headquarters Station to travel longer distances to reach these locations.

The representative location at Justice Road and Peace Lane would experience an increase of approximately one minute with the build alternatives compared to the No Build Alternative. Another representative location at East Vilas Road and McLoughlin Drive would take nearly two additional minutes to reach from the Jackson County Fire District White City Headquarters Station with the build alternatives compared to the No Build Alternative.

Due to the design refinements that have occurred for the FEIS, the Preferred Alternative will include emergency access gates at Justice Road on both sides of the bypass to allow access for emergency vehicles between the bypass and Justice Road. As shown in Table 3.5-4, emergency response times from the Jackson County Fire District White City Headquarters Station to the representative location at Justice Road and Peace Lane will be similar under the Preferred Alternative (6.0 minutes) compared to the No Build Alternative (5.8 minutes).

Emergency response times from Medford Fire Station Number Four and Number Five would not change with the build alternatives compared to the No Build Alternative.

Emergency response times for other emergency response agencies in the project area that do not respond from a single location, such as the Medford Police Department and the Jackson County Sheriff's Department, would generally improve due to shorter travel times, improved intersection operations, shorter queue lengths, and enhanced local mobility. However, all emergency response agencies in the project area could experience longer emergency response times to the representative locations on East Gregory Road, Corey Road, Justice Road at Peace Lane, and East Vilas Road at McLoughlin Drive.

#### JTA Phase

The JTA phase would reduce travel times, improve intersection operations, and enhance mobility, resulting in improved connections among neighborhoods, public service locations, and community facilities. The JTA phase would result in the removal of the access to the USCIS facility, changing from Commerce Drive to a new local road running south from Airway Drive, connecting from Vilas Road. Design Option B, under the JTA phase, would result in the displacement of the Spirit of Life Christian Center.

Due to the design refinements that have occurred for the FEIS, under the JTA phase the existing connection to the USCIS facility will remain in the same location. The bypass will be constructed on an overcrossing at Commerce Drive and Commerce Drive will continue to provide an approach road for the USCIS facility. The new local roadway connecting to Airway Drive is no longer necessary with these design refinements and will not be constructed.

The following impacts or changes that would occur under the build alternatives would not occur under the JTA phase.

- The JTA phase would not impact the Jackson County Fire District White City
  Headquarters Station at Agate Road and Avenue G or result in the relocation of the
  Denman Wildlife Area parking lot because the JTA phase would not extend that far
  north.
- The JTA phase would not impact the Bear Creek Greenway, as under the SD Alternative, and the JTA phase would not result in the grade separation of the intersection of Poplar Drive and OR 62, as under the DI Alternative.

There would be no changes in emergency response times from project area fire stations to most representative locations with the JTA phase compared to the No Build Alternative. Emergency response times from the Jackson County Fire District White City Headquarters Station to the representative location on Corey Road would increase by up to two minutes with the JTA phase compared with the No Build Alternative. Emergency response times from the Jackson County Fire District White City Headquarters Station to the representative location on Justice Road at Peace Lane and on East Vilas Road at McLoughlin Drive would increase by less than one minute with the JTA phase compared with the No Build Alternative. Other emergency response agencies in the project area would likely experience similar increases in reponse times to these representative locations.

Due to the design refinements that have occurred for the FEIS, emergency response times from the Jackson County Fire District White City Headquarters Station to the representative location at Justice Road and Peace Lane will be reduced under the JTA phase to 4.5 minutes, (1.3 minutes less than under the No Build Alternative) as a result of the emergency access gates between the bypass and Justice Road (see Table 3.5-4).

# 3.5.6 Avoidance, Minimization, and/or Mitigation Measures: Community Facilities

Important considerations regarding community facilities and public services included potential impacts on the Bear Creek Greenway, the Denman Wildlife Area, Jackson County Fire District White City Headquarters Station, and maintenance of overall emergency response times throughout the project area.

Impacts on the Bear Creek Greenway and on the Denman Wildlife Area were carefully considered and constrained the conceptual design of the build alternatives. The impact on the Bear Creek Greenway would be further minimized by the use of a retaining wall rather than a fill slope in this location. The eastern edge of the Denman Wildlife Area is located along Agate Road. Both build alternatives would abut the Wildlife Area property, but would not encroach upon the Denman Wildlife Area. Both build alternatives would include the replacement parking lot for the wildlife area located at the southern end of 11th Street.

The Jackson County Fire District White City Headquarters Station located at Agate Road and Avenue G would be located immediately adjacent to the build alternatives. The design of the build alternatives would accommodate the fire station at that location by building a structure (i.e., a viaduct) in this area to maintain direct access to Agate Road. ODOT would continue to coordinate with Jackson County Fire District No. 3 and other emergency services in the area to ensure that emergency response times would not be adversely impacted.

During construction, the following actions could be taken to avoid, minimize and mitigate temporary adverse impacts to community facilities:

- Maintain local access to community facilities identified above for emergency vehicles at all times throughout construction.
- Limit temporary lane closures with flagging operations to nighttime and other off-peak times.
- Coordinate with community service providers, especially law enforcement and other emergency responders, in planning detours and closures.
- Provide notice of planned construction activities, planned temporary road closures and detours, and changes in other access routes.

# 3.5.7 Environmental Consequences: Businesses and Established Business Districts

This section discusses business displacements, changes to how businesses are accessed, to business parking availability, to non-motorized connections, to the regional economy and traffic flow, and fiscal impacts.

### **Business Displacements**

#### **Build Alternatives**

The build alternatives would result in between 40 and 57 business displacements depending on the alternative and design option chosen, as shown in Table 3.5-5 and Figures 3.3-1 through 3.3-8. Design Option B of the DI Alternative would displace the most businesses, 57, and Design Options A and C of the SD Alternative would displace the least, 40. As shown in Figures 3.3-1 through 3.3-8, there are five areas where business displacements would occur:

- Along OR 62 between I-5 and Delta Waters Road, where the build alternatives differ.
- Along Vilas Road between OR 62 and Table Rock Road.
- Along existing OR 62 and Agate Road between Justice Road and the vicinity of OR 140/Leigh Way, where the design options differ.
- Along Agate Road north of OR 140/Leigh Way.
- Along Dutton Road west of existing OR 62.

Due to the design refinements that have occurred for the FEIS, the Preferred Alternative will result in approximately 34 business displacements.

Displacement of these businesses would not separate an established business district. Some of the displaced businesses would be pass-by businesses, located largely in the area of the southern terminus of the project, and would likely need to relocate near a road with high traffic volumes.

The DI Alternative would result in six more business displacements than the SD Alternative. These would be along OR 62 between I-5 and Delta Waters Road. Design Option B would result in eleven more business displacements than Design Option A or C. These would be located along the west side of existing OR 62 between Justice Road and Gregory Road. Other business displacements in the area where the design options differ would occur in the area of the directional interchange, along OR 62 and Agate Road north of Gregory Road. See Section 3.3 Right-of-Way and Utilities for further details.

#### **JTA Phase**

Ten to 14 business displacements would occur under the JTA phase, depending on design option, as shown in Table 3.5-5 and Figures 3.3-9 through 3.3-12c. Three would occur in the vicinity of the southern terminus of the project. Seven would occur in the vicinity of Vilas Road. Design Option B would result in four business displacements along the west side of OR 62 between Justice Road and Gregory Road. Design Options A and C would not result in any business displacements in this area, as shown in Table 3.5-5.

Due to the design refinements that have occurred for the FEIS, the JTA phase will result in approximately five business displacements

Table 3.5-5 Business Displacements by Build Alternative and JTA Phase

		Build Alternatives								
		SD Alternative		DI Alternative			JTA Phase			
General Location	No Build Alternative	Design Option A	Design Option B	Design Option C (Preferred Alt.)	Design Option A	Design Option B	Design Option C	Design Option A	Design Option B	Design Option C (Preferred Alt.)
Along OR 62 between I-5 and Delta Waters Road	0	7	7	7	13	13	13	3	3	3
Along Vilas Road between OR 62 and Table Rock Road	0	8	8	8	8	8	8	7	7	7 0
Along existing OR 62 or Agate Rd between Justice Road and OR 140/ Leigh Way vicinity	0	8	19	8 11	8	19	8	0	4	0 2
Along Agate Rd north of OR 140/ Leigh Way	0	3	3	3	3	3	3	0	0	0
Along Dutton Road west of existing OR 62	0	14	14	14 5	14	14	14	0	0	0
Total	0	40	51	40 34	46	57	46	10	14	10 5

Source: Right of Way Technical Report, 2011.

#### **Changes in Approaches to Businesses**

#### **Build Alternatives**

Changes to driveways that provide access to businesses would occur in the area of the southern terminus of the project area, near the Medford Airport, along Vilas Road, along Agate Road, and on Dutton Road, as shown in Figure 2-4.

In the area of the southern terminus, the DI Alternative would result in changes in how businesses along OR 62 between I-5 and Delta Waters Road are accessed. These businesses, which are currently accessed directly from OR 62, would be accessed from Hilton Road, Corona Avenue, or Skypark Drive. The SD Alternative would not result in any changes to how businesses in this area are accessed.

Because through traffic would travel on the bypass under either build alternative, visibility of existing pass-by businesses would be reduced and patronage of these pass-by businesses could decline. Commerce Drive, which is currently the primary access route to the USCIS facility, would be closed. Access to the USCIS facility would be provided by a new local road running south from Airway Drive, connecting from Vilas Road to the airport.

Due to the design refinements that have occurred for the FEIS, under the Preferred Alternative, Commerce Drive will not be closed, because the bypass will be elevated and will cross over Commerce Drive on a structure. Commerce Drive will continue under the bypass to connect to the USCIS facility.

Several businesses along Vilas Road, Agate Road, and Dutton Road, which are currently accessed via driveways directly off of these roads, would be accessed via driveways from new local streets. These would be constructed as part of the project. Most of the businesses in these areas are destination-type businesses. Therefore, changes in how these businesses are accessed would not be considered adverse impacts.

#### **JTA Phase**

Changes to driveways that would occur with the JTA phase are shown in Figure 2-9. Under the JTA phase, driveways to existing business along OR 62 between Poplar Drive and Delta Waters Road would remain open or would be combined with adjoining driveways, and the driveways would be restricted to right turns only (both

in and out). These changes are detailed in Figure 2-10. The access route to the USCIS facility would change to a new local road running south from Airway Drive, connecting from Vilas Road, as with the build alternatives. Except where properties are purchased, driveways along Vilas Road would remain as they are today.

Due to the design refinements that have occurred for the FEIS, Commerce Drive will not be closed because the bypass will be elevated and will cross over Commerce Drive on a structure. Commerce Drive will continue under the bypass to connect to the USCIS facility.

At the northern terminus of the JTA phase, there would be changes in how businesses along the east side of OR 62 are accessed, due to closure of the Corey Road connection between OR 62 and Crater Lake Avenue. The affected businesses would be accessed from new local roads that would be constructed as part of the JTA phase. Agate Road would no longer connect directly to existing OR 62 under the JTA phase. The access route to businesses along Agate Road and the business on Gregory Road to the west of Agate Road from existing OR 62 would be via Leigh Way to the north.

#### **Changes to Business Parking**

#### **Build Alternatives and JTA Phase**

The amount of off-street parking that would be removed as a result of the project was estimated utilizing aerial maps. Where a business would not be displaced by the project, but would lose some off-street parking spaces, the number and proportion of parking spaces removed from each parcel were estimated. No businesses would lose more than 20 percent of their off-street parking spaces as a result of the build alternative or JTA phase. Based on currently available information, there would be no instances in which a business would lose so much parking capacity that it would no longer be able to stay in business.

### **Changes to Non-Motorized Connections**

#### **Build Alternatives**

In the area of the Medford Airport, non-motorized connections to businesses would not be impacted by the build alternatives because the airport currently limits east-west connections in this area. Non-motorized connections to businesses in the area of Vilas Road would improve due to new sidewalks and bike lanes that would be added along both sides of Vilas Road between OR 62 and Table Rock Road, shown in sheets 5 and 6 of Figure 2-4. This would improve bike and pedestrian safety in this area, though the proposed interchange at the bypass would limit the attractiveness of the area for bicycling and walking.

East-west connections for non-motorized travel in the area between Vilas Road and Antelope Road would be limited by the proposed bypass. There would be no east-west connection for this stretch of nearly three miles.

Along Agate Road, non-motorized connections to businesses would be more limited than they are today because Leigh Way and Avenue A would terminate at the proposed bypass. East-west connections would be maintained at Antelope Road, Avenue G, and Avenue H. In the area of the northern terminus of the project area, some businesses are currently located at the west end of Dutton Road. Access to these businesses would be via new local roads, shown on sheets 12 and 13 of Figure 2-4.

#### **JTA Phase**

Under the JTA phase, impacts on non-motorized connections to businesses would be the same as the build alternatives in the area of Medford Airport and between Vilas Road and Antelope Road. The proposed bike lanes and sidewalks along Vilas Road would not be included in the JTA phase. Therefore, there would be no change from existing conditions along Vilas Road for non-motorized connections. The JTA phase would not include most of the impacts along Agate Road, since its northern terminus is at Gregory Road. Non-motorized modes of transportation would still be able to connect between Gregory Road and Agate Road under

the JTA phase. Where the proposed bypass would terminate at existing OR 62 under the JTA phase, there would be a signalized intersection with sidewalks and bike lanes, which would improve safety in this area for non-motorized modes of transportation.

#### **Changes to the Regional Economy and Traffic Flow**

#### **Build Alternatives**

With the build alternatives, through traffic would predominantly travel on the proposed bypass, while local traffic would use existing OR 62. Travel time would be reduced throughout most of the corridor, improving access to businesses in the project area. Travel time improvements would ease freight transport and commute travel for companies in the region, which would in turn decrease costs for those businesses.

Projected 2035 PM peak-hour travel times from downtown Medford to selected points within the project area were evaluated. Travel times for the SD or the DI Alternative would be similar. Either build alternative would result in an approximately 30 to 40 percent improvement in PM peak-hour travel time in 2035 throughout the corridor. PM peak-hour travel times from downtown Medford to Eagle Point would improve from 36 minutes along existing OR 62 to 22 minutes along the proposed bypass, as shown in Table 3.2-5.

The DI Alternative would create a grade separation at Poplar Drive and OR 62, resulting in longer travel distances for vehicles to reach businesses in the area of the southern terminus of the project using local streets. This would potentially make travel more difficult for commuters and freight carriers accessing businesses in this area under the DI Alternative than under the SD Alternative.

#### **JTA Phase**

Under the JTA phase, PM peak-hour travel times in 2035 would improve by approximately 20 to 25 percent between the south and north termini of the JTA phase itself and 10 to 15 percent in the area north of the northern terminus. PM peak-hour travel time from downtown Medford to Eagle Point would improve from 36 minutes under the No Build Alternative to 32 minutes under the JTA phase.

# 3.5.8 Avoidance, Minimization, and/or Mitigation: Businesses and Established Business Districts

ODOT offers assistance with relocation to residents and businesses displaced by ODOT projects. This includes assistance to find suitable replacement locations, including locations with high traffic volumes suitable for pass-by businesses that would be displaced. ODOT would meet the requirements under the Uniform Relocation Assistance and Property Acquisition Policies Act of 1970 (FHWA 2005) and the Surface Transportation and Uniform Relocation Assistance Act of 1987 (FHWA 1987) to mitigate impacts on the residences and businesses that would be directly displaced. Appendix D provides more information on ODOT's Relocation Assistance Program.

Shifting the alignment of the build alternatives slightly in the vicinity of Dutton Road could avoid impacting 14 businesses located along Dutton Road.

There is an important trade-off to consider between the design options in the area between Justice Road and Gregory Road. Design Option B was developed to avoid vernal pool and threatened and endangered species impacts in this area. In order to do so, this design option would displace 11 more businesses than Design Option A or C.

There are several locations where direct driveways to businesses from the highway would be removed. Where practicable, an alternative means of access would be constructed as part of the project. The following new connections would be constructed, as shown on Figures 2-4 and 2-9:

- A new connection between Corona Avenue and Skypark Drive (DI Alternative
- A new road extending south from Airway Drive to connect to the USCIS facility at the Medford Airport (both build alternatives and the JTA phase);
- Local road extensions and improvements in the vicinity of Vilas Road (both build alternatives);
- New connections to industrial properties along Agate Road (both build alternatives); and
- New connections in the vicinity of Dutton Road and the northern terminus of the project (both build alternatives).

The Preferred Alternative will not include the new road extending south from Airway Drive, since Commerce Drive will continue to provide a connection to the USCIS facility.

Where the routing to a business would change, clear signage indicating types of businesses available, directions on how to access them, and distance to these businesses could help to mitigate this potential adverse impact, particularly for pass-by businesses.

In addition, under the JTA phase, U-turns would be allowed on OR 62 at Poplar Drive/Bullock Road. This would mitigate access impacts for businesses along OR 62 in this area.

During construction, the following actions could be taken to avoid, minimize and mitigate temporary adverse impacts to area businesses:

- Maintain local access to community facilities identified above for emergency vehicles at all times throughout construction.
- Limit temporary lane closures with flagging operations to nighttime and other off-peak times.
- Coordinate with area business owners in planning detours and closures.
- Provide notice of planned construction activities, planned temporary road closures and detours, and changes in other access routes.

# 3.5.9 Environmental Consequences: **General and Particular Social Groups**

#### **Build Alternatives and JTA Phase**

The area near the southern terminus of the project has a higher population of residents over age 65 than Jackson County as a whole. Residents throughout the project area are more likely to be disabled, compared to residents in Jackson County as a whole. In general, while the proposed bypass would improve northsouth travel in the project area and add new sidewalks on some local streets, the bypass would restrict east-west connections, often creating a need for those living adjacent to the proposed bypass to travel longer distances. While this would be a minor impact on the motorist, it would be a greater restriction on pedestrian mobility.

To the extent that the proposed bypass would relieve congestion in the project area and improve travel time, the project could also result in an overall improvement in ability to access services and businesses throughout the project area. This change would apply to both the build alternatives and the JTA phase, though the effect would be less under the JTA phase than under the build alternatives.

The project would also result in a temporary adverse impact on these populations to the extent that the adjustment to new vehicle and pedestrian routes and new individual access routes to businesses is more challenging for these populations relative to the general population.

# 3.5.10 Avoidance, Minimization, and Mitigation: General and Particular Social Groups

All residents displaced by the project would receive relocation assistance to secure suitable replacement housing. Further detail may be found in Section 3.3 Right-of-Way and Utilities.

In addition, the following actions could be taken during construction to avoid, minimize and mitigate temporary adverse impacts to citizens and social groups:

- Maintain local access to businesses and residences at all times throughout construction;
- Limit temporary lane closures to nighttime and other off-peak times;
- Provide notice of planned construction activities, planned temporary road closures and detours, and changes in other access routes; as well as
- The air quality and construction noise abatement measures in Sections 3.16.4.2 and 3.17.4.2.

# 3.5.11 Environmental Consequences: Local, Regional, and State Economy

#### **Build Alternatives and JTA Phase**

Transportation facilities can result in changes to property values (both increases and decreases) and changes to the amount of land on the property tax rolls.

A small number of properties' proximity to roads with high traffic volumes could increase with either of the build alternatives or the JTA phase, which could result in slightly lower property values for residential properties but could slightly increase commercial property values, especially for pass-by businesses. Adverse impacts on business revenues due to temporary construction nuisances would likely be minimal and would not affect the ability of businesses to operate in the long-term.

Based on Jackson County assessment data, a reduction in annual property tax revenue ranging from approximately \$40,000 to \$54,000 would be expected in the short-run with the build alternatives, due to the conversion of private property to public right-of-way. This would represent a reduction in annual property tax revenue of approximately 0.14 percent to 0.18 percent. This would be a minimal impact within the context of the Jackson County annual budget of \$335.9 million.

Short-run economic impacts due to construction spending were calculated using local multipliers to estimate the number of jobs that would be supported by the project (expressed as full-time equivalent, or FTE). Project construction for the build alternatives is estimated to support approximately 1,400 to 1,590 direct FTEs (construction jobs). Approximately 390 to 440 indirect FTEs (due to local purchase of construction supplies and materials) and 390 to 440 induced FTEs (the spending in the local economy by construction workers) would also be sustained by project construction. This would represent a temporary economic benefit to the project area and to Jackson County, lasting the duration of project construction. Construction would be expected to last approximately two years for the JTA phase and another two years for the build alternatives. The JTA phase would sustain approximately 580 direct FTEs, 160 indirect FTEs, and 160 induced FTEs, during the estimated two-year construction.

Long term, improved traffic conditions related to the build alternatives and JTA phase would increase the attractiveness of the area for new businesses. To the extent that Jackson County would experience increases in assessed value attributable to additional development and increases in existing property values, property tax revenue could increase over time as well.

The cost of maintaining bypassed sections of existing OR 62 when ODOT transfers jurisdiction to the City of Medford and Jackson County would have a fiscal impact on the City and the County. Agreements between ODOT and the City and County would affect when the City and the County begin incurring these maintenance costs. The maintenance costs to the City and County have not been determined.

# 3.5.12 Avoidance, Minimization, and/ or Mitigation: Local, Regional, and State **Economy**

The terms of the agreements between ODOT and the City and County by which ODOT transfers jurisdiction of bypassed sections of existing OR 62 could potentially mitigate the fiscal impact on the City and the County for the cost of maintenance. The terms of this agreement have not yet been determined.

Temporary construction-related adverse impacts on the revenues of some businesses could be mitigated through temporary directional signage to assist customers to locate businesses.

# 3.5.13 Avoidance, Minimization, and/or **Mitigation Commitments Incorporated into** the Preferred Alternative

# 3.5.13.1 Design Commitments

ODOT makes the following commitments.

#### JTA Phase

The terms and agreements between ODOT and the City and County by which ODOT transfers jurisdiction of bypassed sections of existing OR 62 could potentially mitigate the fiscal impact on the City and the County for the cost of maintenance.

#### JTA Phase and Preferred Alternative Subsequent to the **Construction of the JTA Phase**

- ODOT has updated the design for the Preferred Alternative and the JTA phase to include and emergency vehicle-only access between the bypass and Justice Road on the west and east sides of the bypass.
- ODOT will continue to coordinate with Jackson County Fire District No. 3 and other emergency services in the area to ensure that emergency response times will not be adversely impacted.

#### **Preferred Alternative Subsequent to the Construction of** the JTA Phase

ODOT will accommodate access to the Jackson County Fire District White City Headquarters Station property at Agate Road and Avenue G by constructing the bypass on a viaduct above Agate Road in the area of the station.

#### 3.5.13.2 Construction Commitments

ODOT makes the following commitments.

- ODOT will maintain local access for emergency vehicles at all times throughout
- ODOT will limit temporary lane closures to nighttime and other off-peak times whenever possible. Some lane closures will run over several days.
- ODOT will coordinate with law enforcement, emergency responders, and area business owners in planning detours and road closures.
- ODOT will provide notice of planned construction activities, planned temporary road closures and detours, and changes in other access routes.
- ODOT will maintain local access to businesses and residences at all times throughout construction. There will be some nighttime closures when businesses are closed.
- ODOT will include temporary directional signage to assist customers to locate businesses during construction.

# 3.6 Parks, Recreational Facilities, and Wildlife Refuges

# PARKS AND REC

3.6

#### **Section 3.6 Content**

3.6.1	Regulat	cory Setting				
	3.6.1.1	Section 4(f)				
	3.6.1.2	Section 6(f)				
3.6.2	Affecte	d Environment				
	3.6.2.1	Bear Creek Greenway				
	3.6.2.2	Denman Wildlife Area				
	3.6.2.3	Proposed Parks and Recreational Facilities				
	3.6.2.4	Informal, Undesignated Multi-Use Pathway on the Medco Haul				
		Road Alignment				
3.6.3	Environ	mental Consequences				
	3.6.3.1	Direct Impacts				
	3.6.3.2	Indirect Impacts				
	3.6.3.3	Construction Impacts				
	3.6.3.4	Resources Evaluated Relative to the Requirements of Section				
		4(f)				
	3.6.3.5	Resources Evaluated Relative to the Requirements of Section				
		6(f)				
3.6.4	Avoidance, Minimization and/or Mitigation					
3.6.5	Avoidance, Minimization and/or Mitigation Commitments Incorporated					

# 3.6.1 Regulatory Setting

Into the Preferred Alternative

# **3.6.1.1 Section 4(f)**

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 U.S.C. 303, declares that "it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites."

Section 4(f) specifies that the Secretary [of Transportation] may approve a transportation program or project requiring the use of publicly owned land of a public park, recreation area, or wildlife or waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

- there is no prudent and feasible alternative to using that land; and
- the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use; or
- the FHWA determines that the use of the property, including any measure(s) to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures) committed to by the applicant, will have a de minimis impact on the property.

Section 4(f) further requires consultation with the Department of the Interior and, as appropriate, the involved offices of the Departments of Agriculture and Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f). If historic sites are involved, then coordination with the State Historic Preservation Officer or Tribal Historic Preservation Officer is also needed.

# 3.6.1.2 Section 6(f)

The Land and Water Conservation Fund Act (LWCF) State Assistance Program was established by the LWCF Act of 1965 (Section 6, Land and Water Conservation Fund Act of 1965, as amended; Public Law 88-578; 16 U.S.C. 4601-4 et seq.) to stimulate a nationwide action program to assist in preserving, developing, and assuring to all citizens of the United States of present and future generations such quality and quantity of outdoor recreation resources as may be available and are necessary and desirable for individual active participation. The program provides matching grants to states and through states to local units of government for the acquisition and development of public outdoor recreation sites and facilities.

Property acquired or developed with LWCF assistance must be retained and used for public outdoor recreation. Any property acquired and/or developed with LWCF assistance may not be converted for any purpose other than public outdoor recreation uses without the approval of National Park Service (NPS) pursuant to Section 6(f)(3) of the LWCF Act. The conversion provisions of Section 6(f)(3), 36 CFR Part 59, apply to each area or facility for which LWCF assistance was obtained, regardless of the extent of participation of the program in the assisted area or facility and consistent with the contractual agreement between NPS and the state.

### 3.6.2 Affected Environment

There are several existing and planned parks, recreation facilities, and wildlife refuges located in the API for this section, which is the area approximately 1 mile around the Project footprint, as shown in Figure 3.6-1. Of the identified areas within the API, the Bear Creek Greenway, the planned Midway Park, and the Denman Wildlife Area are the only facilities situated adjacent to one or both of the build alternatives. The section of the Bear Creek Greenway in the API, and the planned Midway Park site are owned and managed by the City of Medford. The Denman Wildlife Area is owned and managed by the Oregon Department of Fish and Wildlife (ODFW). All three areas are protected by Section 4(f) because they are publically owned and operated, are significant, and their major purposes are for parks and recreational activities.

## 3.6.2.1 Bear Creek Greenway

The Bear Creek Greenway is a 21-mile long recreational multi-use path designated as an "Oregon Recreation Trail", as shown on Figure 3.6-1. The Bear Creek Greenway extends from Ashland to Central Point on a narrow corridor of publicly-owned land that follows Bear Creek, which is roughly adjacent to I-5.

In the project area I-5 is directly adjacent to the Bear Creek Greenway. The relative elevations of I-5 and the Bear Creek Greenway vary from level to instances where I-5 is elevated on an embankment above the Bear Creek Greenway. In the project area I-5 is elevated by as much as 20 feet above the Bear Creek Greenway path.

The Bear Creek Greenway is jointly managed by Jackson County, the six city governments in which the greenway is located, and the nonprofit Bear Creek Greenway Foundation, in accordance with the Bear Creek Greenway Management Plan. The City of Medford owns, manages, and has jurisdiction over the segment of the Bear Creek Greenway within the city limits, which includes the segment of the Greenway that is within the project API.

In the API, the Bear Creek Greenway path is located on parcels of land owned by the City of Medford and parcels owned by ODOT. For the purposes of the Section 4(f) analysis for this project, the geographical boundaries of the Bear Creek Greenway are considered the 12-foot wide multi-use path, along with a 10-foot buffer on either side of the path, as shown in Figure 3.6-2.

For further information regarding parks, recreational facilities, and wildlife refuges including citations to source documents, refer to the **OR 62 Corridor Solutions** Project Parks, Recreational Facilities and Wildlife Refuges Technical Report, July 2011. This report is available from the ODOT contact person identified on page i of this EIS.

Figure 3.6-1

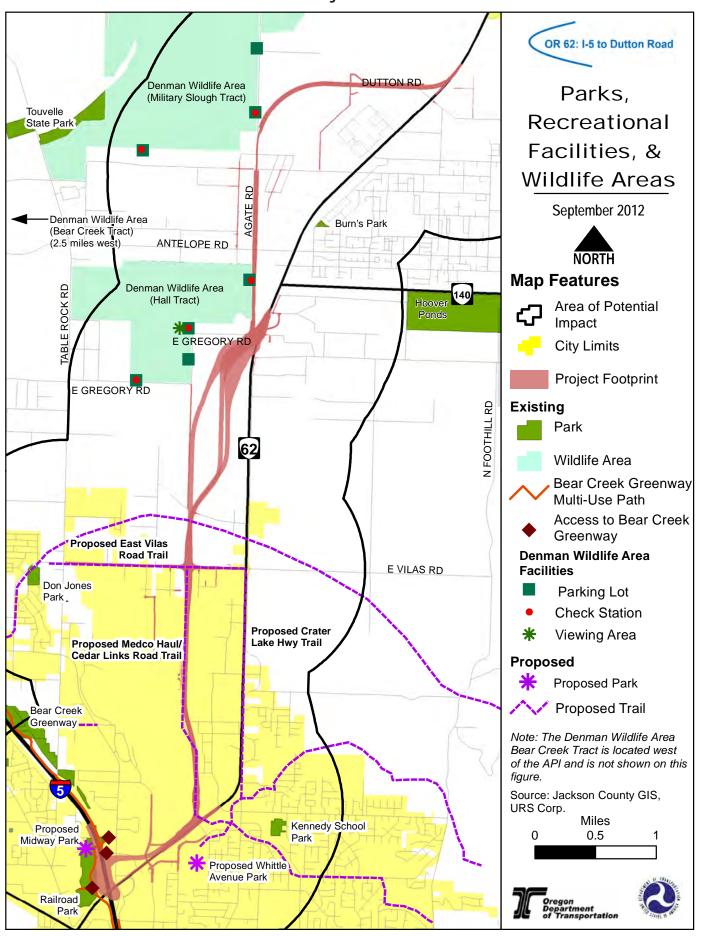


Figure 3.6-1 FEIS

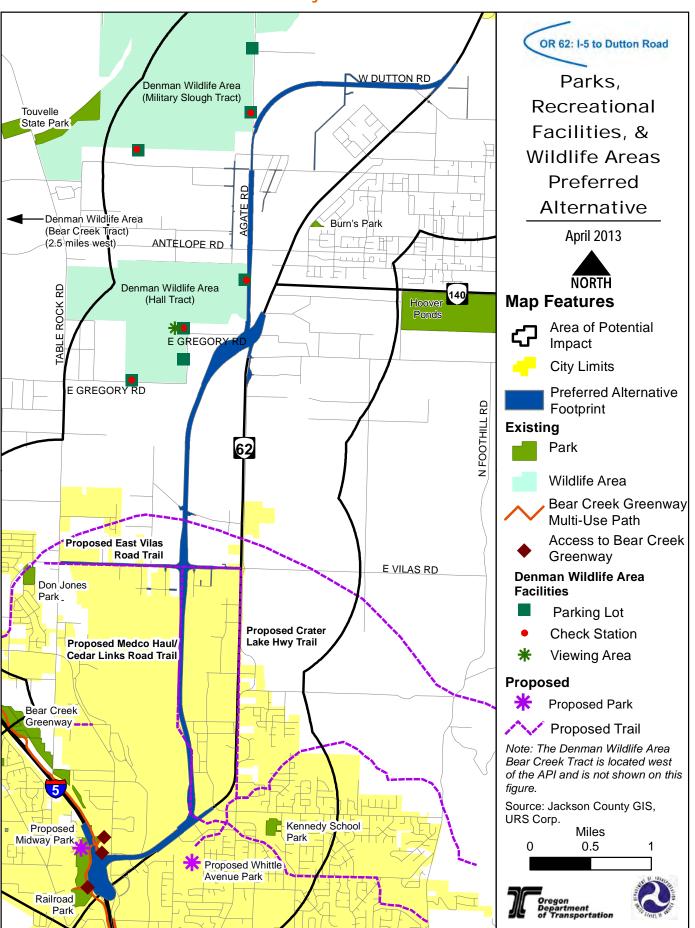


Figure 3.6-2

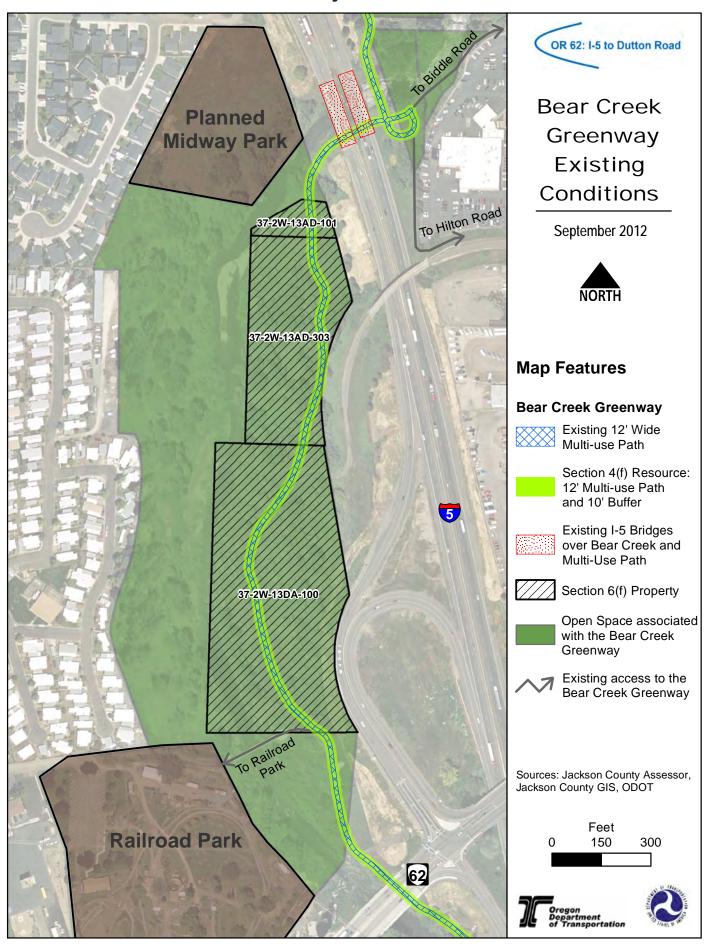
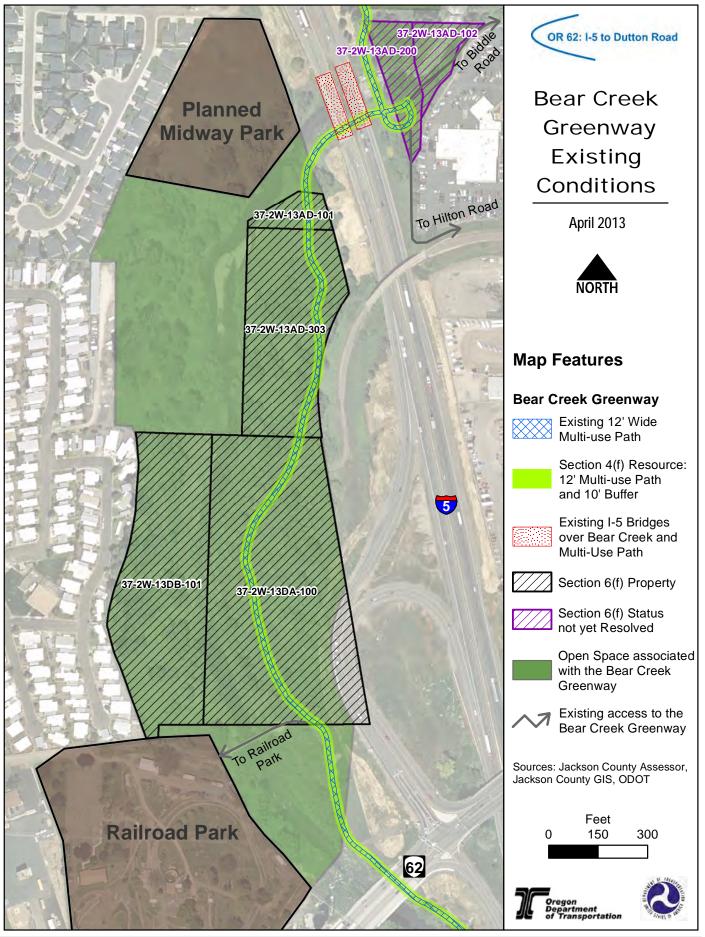


Figure 3.6-2 FEIS



The publicly-owned parcels associated with the Bear Creek Greenway include no improvements other than the path itself and management strategies for the parcels are focused on enhancing recreational opportunities on the path. The Bear Creek Greenway Management Plan specifies that vegetation management is focused on keeping the trail open and eliminating potential safety hazards to path users. Existing vegetation is a mixture of native and invasive plants.

Recreational activities on the multi-use path include bird watching, walking, jogging, bicycling and roller skating. The path also serves a transportation purpose and functions as a bicycle commuter route. Federal CMAQ funding has been utilized on portions of the Bear Creek Greenway. Some users of the path use the path to bicycle between the cities along it, while other users are local. Natural attributes of the multi-use path include the Bear Creek waterway and associated riparian zones.

Within the API, there are three access routes to the Bear Creek Greenway, as shown in Figure 3.6-2. From south to north, access is obtained from:

- Railroad Park on the west side of I-5;
- · Hilton Road north of OR 62: and
- Biddle Road, along the north side of Crater Lake Ford.

The City of Medford received LWCF grants to acquire some of the land in the API and to build parts of the path. The tax parcels that were purchased using LWCF grants, as shown in Figure 3.6-2, are subject to Section 6(f) requirements.

Also shown in Figure 3.6-2 are Railroad Park and the planned Midway Park, adjacent to the Bear Creek Greenway. Both Railroad Park and the planned Midway Park are owned by the City of Medford. Railroad Park would not be adjacent to either of the build alternatives and would, therefore, not be impacted. The planned Midway Park is described further in Section 3.6.2.3.

#### 3.6.2.2 Denman Wildlife Area

The Denman Wildlife Area is a 1,858-acre wildlife area that comprises three non-contiguous tracts of land: the Hall Tract (600 acres), Military Slough (1,198 acres), and the Bear Creek Tract (60 acres), as shown in Figure 3.6-3. All three tracts are Section 4(f) resources. The Denman Wildlife Area is managed by ODFW in accordance with the Ken Denman Wildlife Area Long Range Management Plan. The plan describes the management goals for the Denman Wildlife Area as follows:

The wildlife area is currently managed to protect, enhance and restore all fish and wildlife species and their habitats located on the wildlife area, and to provide a wide variety of wildlife-oriented recreational and educational opportunities to the public. A major function of the wildlife area's management is to provide waterfowl and upland bird and deer hunting opportunities. Fishing, hiking, birding and dog training are some of the other recreational activities offered to the public (ODFW 2006, p. 2).

The Hall Tract is located along the west side of Agate Road between East Gregory Road and Antelope Road, adjacent to both build alternatives, as shown in Figure 3.6-3. The Hall Tract consists primarily of open grassland, dotted with permanent and seasonal ponds. These ponds provide habitat for waterfowl sought by both hunters and birdwatchers. Development on the Hall Tract includes the wildlife area headquarters and a wildlife viewing area located at the corner of Gregory Road (the first curve in Gregory Road west of OR 62), as shown in Figure 3.6-3. Two gravel parking lots are also located off Gregory Road and an additional parking lot is located off Agate Road, as shown in Figure 3.6-3. Though the Agate Road parking lot's boundaries are not clearly delineated, the dirt/non-vegetated area commonly used for parking is approximately 7,000 square feet. The headquarters, the westernmost parking lot off Gregory Road, and the Agate Road parking lot all serve as self-service check stations for hunters entering and exiting the wildlife area.

The project footprint, at its closest, comes within approximately 90 feet of the southeastern corner of the Military Slough Tract but the project footprint would not directly impact the Military Slough tract. The Bear Creek Tract is located approximately four and a half miles west of the project footprint. Because both tracts occur outside of the project footprint, they are not discussed further since they would not be impacted.

## 3.6.2.3 Planned and Proposed Parks and **Recreational Facilities**

There is one planned park, one proposed park and five proposed bicycle/ pedestrian paths within the API. These parks and paths are listed in the Public Facilities Element of the Medford Comprehensive Plan, updated in November 2010, and described below.

#### **Midway Park (planned)**

The City of Medford plans to create Midway Park in the area shown on Figure 3.6-2. Although the city has not yet identified funding for building the improvements, Medford has developed a park master plan and intends to build the park within the next five or six years. When completed, the park would include a dog park, playground, basketball court, restrooms, picnic area, and parking. These improvements would be located on the northwestern side of Bear Creek, inside the project API.

#### Whittle Avenue Park (proposed)

Public Facilities Element of the Medford Comprehensive Plan identifies a need for a neighborhood park south of OR 62. A potential site for this park, as shown in the plan, is a seven acre parcel of undeveloped land between Corona and Whittle Avenues south of OR 62, as shown in Figure 3.6-4. Jackson County currently owns the land and no agreement exists between Medford and Jackson County for the city's future acquisition of the land. Jackson County has no plans to develop this land for a park, recreational facility, or wildlife refuge.

# Recreational Bicycle/Pedestrian Paths (proposed)

The Leisure Services Plan Update, produced by the Medford Parks and Recreation Department and used to as a basis for amendments to the Public Facilities Element of the Medford Comprehensive Plan, identifies a need for five bicycle/pedestrian connections in the API. Table 3.6-1 lists the five proposed paths and their descriptions as provided in the Leisure Services Plan.

**Figure 3.6-3** OR 62: I-5 to Dutton Road Denman Wildlife Area September 2012 Denman Wildlife Area (Military Slough Tract) **Map Features Combined Footprint** of all Build Alternatives Denman Wildlife Area Avenue H Avenue G Parking Lot **Check Station** Avenue F Denman Wildlife Area Potential New (Bear Creek Tract) Location for (2.5 miles west) Avenue C 11th Street Agate Road Parking Lot and Check Station Parking Lot and Headquarters Check Station Antelope Road Relocated Parking Lot to be displaced. Interpretive Trailhead and Check Station. Viewing Area Pond 140 Denman Wildlife Area (Hall Tract) E Gregory Road Source: ODOT, Jackson County GIS, ODFW Miles E Gregory Road 0.25 0.5 62

Figure 3.6-3 FEIS

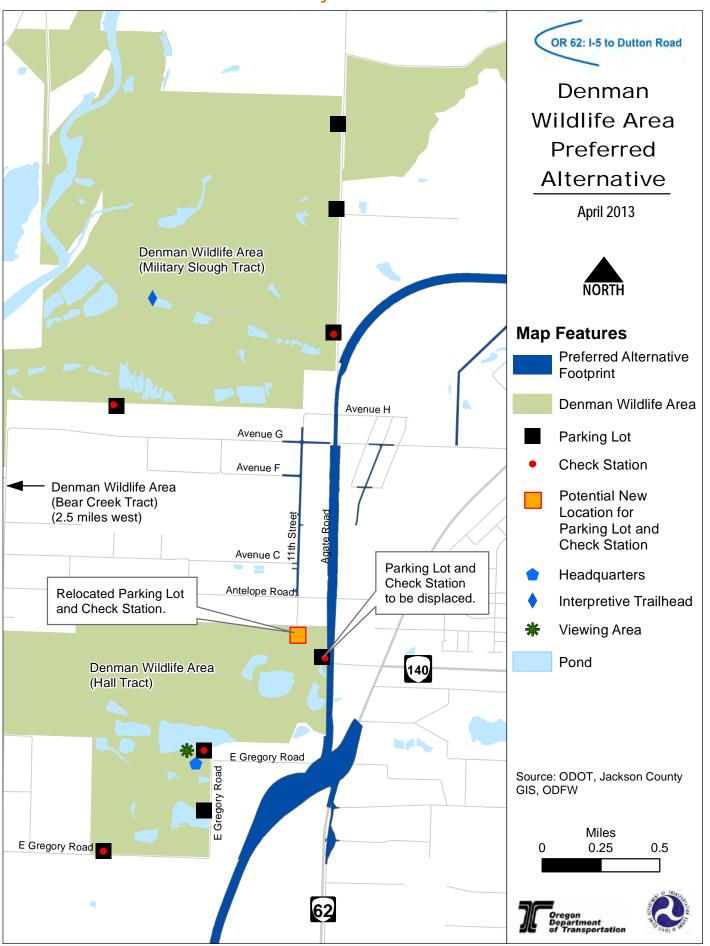


Figure 3.6-4

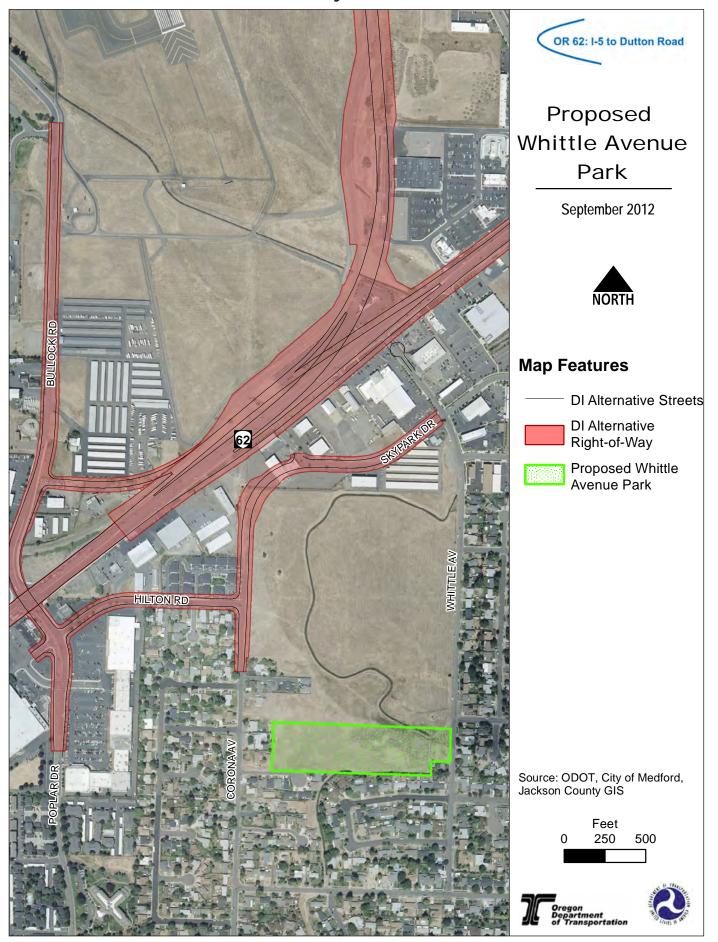


Table 3.6-1 Proposed Paths in the API

Trail#	Name	Linear Park (LP) or Greenway (OSG)	Comments*
T-1	Swanson Creek Trail	OSG, part LP	Mostly outside UGB; connects Prescott to Expo
T-2	East Vilas Road Trail		
T-3	Medco Haul/ Cedar Links Road Trail	LP	Connects T-2, Kennedy School, NP-45 and T-6
T-4	Crater Lake Hwy Trail		
T-5	Hopkins Creek Trail	OSG	Connects NP-28 to CP-27 to Prescott

\*Comments are taken verbatim from Table 6.3 of the Leisure Services Plan Update. Parks referenced in the comments are outside the project API and therefore not discussed in this EIS. "Prescott" refers to Prescott Park, located northeast of Medford. "Expo" refers to the Jackson County Exposition Park located on the east side of I-5, to the northwest of Medford. Kennedy School is located south of Delta Waters Road. NP-45 is a proposed Cedar Links Park in the vicinity of Cedar Links Road and Table Rock Road. T-6 is the proposed Foothill Road/Main Canal Trail. NP-28 is the proposed Whittle Avenue Park. CP-27 is the proposed Hopkins Creek Park in the vicinity of Coker Butte Road east of the API.

Source: Medford Leisure Services Plan Update, Table 6.3 (p. 96).

The Medford Comprehensive Plan includes four of the five trails listed in Table 3.6-1. The Comprehensive Plan does not include Swanson Creek Trail, which is primarily located outside the Medford UGB. Figure 3.6-5 shows the approximate location of the paths listed in Table 3.6-1 and is based on the figures provided in the Comprehensive Plan and the Leisure Services Plan. The figures provided in those two plans are small-scale maps with minimal detail. The level of detail provided in the Leisure Services Plan and the Comprehensive Plan reflects the extent of planning efforts to date in siting the proposed paths.

The Leisure Services Plan clearly states that the trails shown on its maps are conceptual routes. The lines shown in Figure 3.6-5 should be interpreted as desired connections between other trails and parks rather than actual alignments. The Leisure Services Plan states that further planning will be necessary to determine the precise location for each trail and to design the trail itself. The Comprehensive Plan contains no detail about whether the paths would take the form of sidewalks and on-street bicycle lanes or off-street multi-use paths.

The City of Medford has not acquired land for any of the trails listed in Table 3.6-1. Some trails, such as the East Vilas Road Trail and the Crater Lake Highway Trail roughly follow existing roads. However, the City of Medford Parks Department has envisioned that those two trails would be off-street paths. A portion of the Medco Haul/Cedar Links Road Trail appears to be located on the section of the Medco Haul Road alignment that ODOT owns. The Swanson Creek Trail and Hopkins Creek Trail both appear to be located primarily on privately-owned land. The Leisure Services Plan acknowledges that in order to build any of the proposed trails, the City of Medford will need to coordinate with property owners to purchase land, a step that has not been taken.

ODOT met with the City of Medford Parks Department on July 5, 2012 to better understand the level of planning, land ownership, and intent of the documents identifying these planned trails. As a result of this meeting, Medford Parks representatives confirmed that trail plans are only conceptual in nature and consist only of approximate alignments. Medford Parks Department has not acquired any land for any of the trails listed in Table 3.6-1.

Because the trails have not advanced beyond the conceptual stage and because the Medford Parks Department does not own the land on which the trails are likely to be located, Section 4(f) is unlikely to apply to the proposed trails listed in Table 3.6-1. However, this section of the EIS provides an analysis of the viability of each of these proposed trails considering the construction of OR 62: I-5 to Dutton Road.

**Figure 3.6-5** 

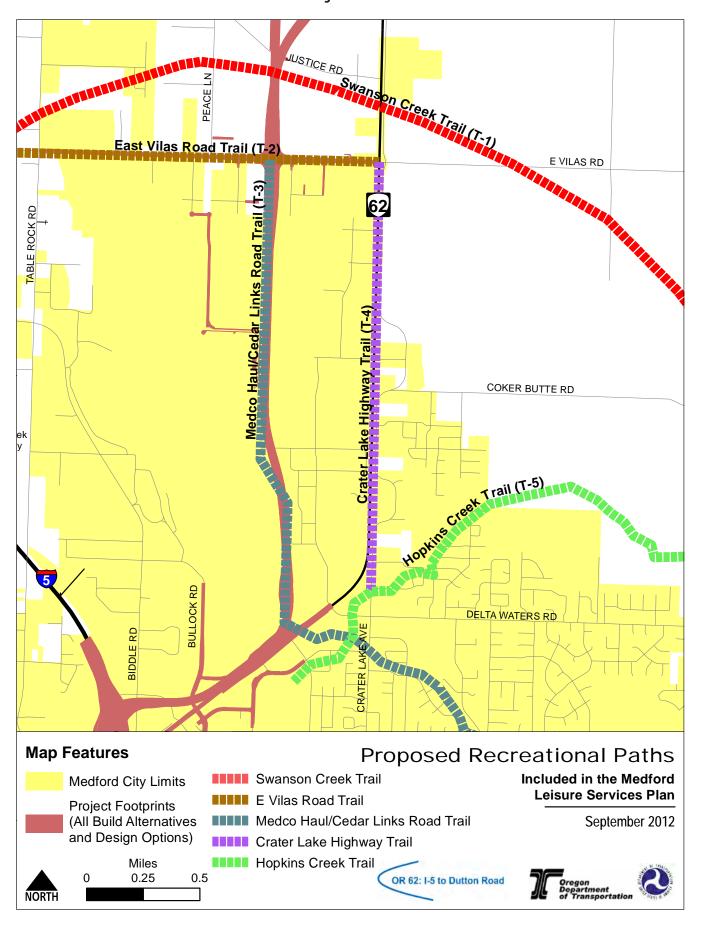
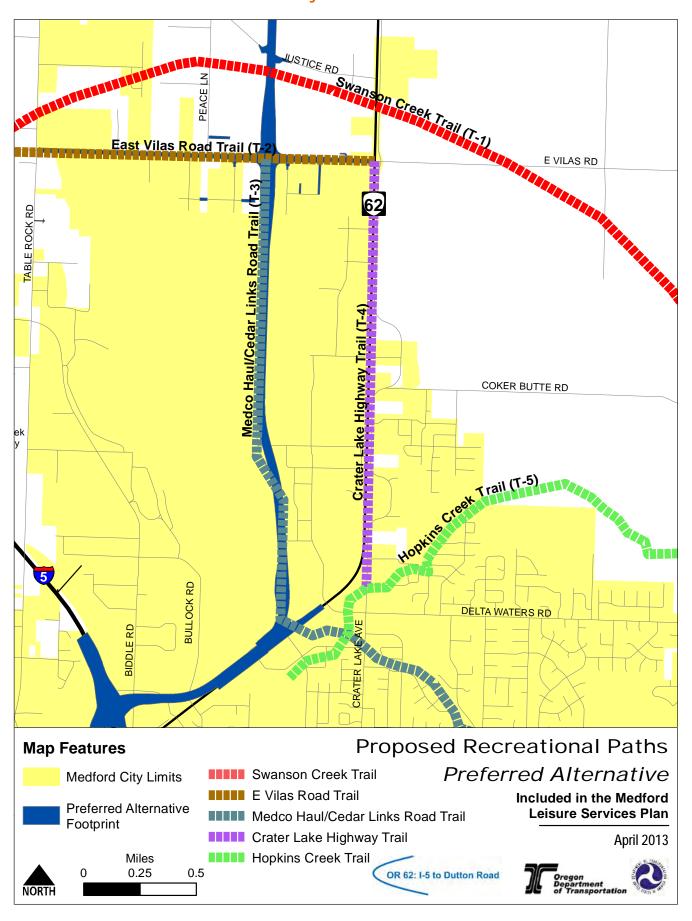


Figure 3.6-5 FEIS



# 3.6.2.4 Informal, Undesignated Multi-Use Pathway on the Medco Haul Road Alignment

An informal, undesignated temporary multi-use pathway was once utilized on the Medco Haul Road alignment, extending from Bullock Road near the southern end of the Medford Airport to Vilas Road. ODOT owns the land on which the informal, undesignated pathway was located and ODOT previously did not actively prohibit the public non-motorized use. ODOT has closed access to the pathway by providing clear signage and obstructions where entries were previously gained. This former pathway is not considered a Section 4(f) resource.

#### 3.6.3 Environmental Consequences

#### 3.6.3.1 Direct Impacts

#### **No Build Alternative**

The No Build Alternative would not directly impact any existing or planned parks, recreational facilities, or wildlife refuges because none of the proposed project facilities would be constructed.

#### **SD Alternative**

The SD Alternative would impact the Bear Creek Greenway, the planned Midway Park, and the Denman Wildlife Area, but not Railroad Park or the proposed Whittle Avenue Park. The SD Alternative would be located in the vicinity of the proposed Medco Haul/Cedar Links Road Path. It would not directly impact either the East Vilas Road Trail (T-2) or Crater Lake Highway Trail (T-4).

#### **Bear Creek Greenway**

The SD Alternative would impact the Bear Creek Greenway, as shown in Figure 3.6-6, but these changes would not impair the attributes, features, or activities that occur on the Bear Creek Greenway. The SD Alternative would require the use of approximately 3.75 acres of Medford-owned land on which the Bear Creek Greenway path is located. Approximately 0.1 acres of this use is the Section 4(f) resource (the path and buffer). Approximately 1.3 acres of this use is encumbered by Section 6(f). In places where the SD Alternative would displace the path and buffer, ODOT would realign the path to ensure that the SD Alternative would not adversely affect the recreational activities that occur on the path.

The Bear Creek Greenway will not be impacted until a phase subsequent to the JTA phase secures funding, final design is completed, and then is constructed. ODOT has committed to consider the use of a retaining wall instead of fill slope to reduce the amount of land needed from Bear Creek Greenway parcels. Use of a retaining wall instead of fill slope would lower the estimated 3.75 acres of land required from Bear Creek Greenway parcels; however the precise amount of land required from Bear Creek Greenway parcels would not be determined until final design is complete for this area of the project.

The U.S. Department of Interior commented on the DEIS that their records indicate that the parcels of land in the northeast corner of Figures 3.6-2 and 3.6-6 are encumbered by Section 6(f), as now shown in Figures 3.6-2 FEIS and 3.6-6 FEIS (parcels 37-2W-13AD-102 and 37-2W-13AD-200). However, ODOT and Jackson County records show do not show that these parcels have received LWCF Act funding Therefore, the DEIS did not identify these parcels as Section 6(f) lands. ODOT will continue to work with NPS and the Oregon Parks and Recreation Department to resolve the status of these parcels. This resolution will occur as part of final design and property acquisition and will determine the precise amount of Section 6(f) land that will be converted and require replacement.

If it is determined that 6(f) status does apply to parcels 37-2W-13AD-102 and 37-2W-13AD-200, then, of the Bear Creek Greenway land used for the Preferred Alternative, an additional 0.3 acres of land would be encumbered by Section 6(f), for a total of approximately 1.6 acres, instead of the 1.3 acres identified in the DEIS.

In addition to realigning several short segments of the path, the SD Alternative would move the Greenway's bridge over Bear Creek near I-5 to accommodate the proposed I-5 northbound on-ramp. The Greenway bridge is currently within the I-5 right-of-way and would be shifted east onto land owned by ODOT. The Greenway path connecting to both ends of the bridge would also be moved. The access path leading to Biddle Road (Figure 3.6-6) would be displaced by the proposed interchange. The SD Alternative would extend the I-5 on- and off-ramps, requiring new I-5 bridges over the multi-use path and Bear Creek. These new bridges would be adjacent to the existing I-5 bridges.

#### **Planned Midway Park**

The SD Alternative would impact the planned Midway Park, as shown in Figure 3.6-6, but these changes would not impair the attributes, features, or activities that would occur in the planned Midway Park. The SD Alternative would require the use of approximately 0.15 acres of Medford-owned land on which Midway Park is planned to be built. Because the impacted area of the planned Midway Park is currently a berm next to I-5 and plans for Midway Park development call for park activities to be concentrated to the west, away from this berm, the SD Alternative would not adversely affect the recreational activities that would occur in the planned Midway Park.

#### **Denman Wildlife Area**

The SD Alternative would also directly impact the Denman Wildlife Area by closing access to an existing parking lot on the Hall Tract. The SD Alternative would replace Agate Road in the vicinity of the Hall Tract with an access-controlled bypass adjacent to the Hall Tract. Figure 3.6-7 shows the location of the proposed bypass relative to the Hall Tract. The SD footprint would not encroach on the Denman Wildlife Area, but it would cause permanent closure of a parking area that connects directly to Agate Road under existing conditions. The parking lot would have to be closed because Agate Road would be replaced by the proposed bypass, which would have access restrictions prohibiting a driveway to the parking lot.

#### Swanson Creek Trail (proposed)

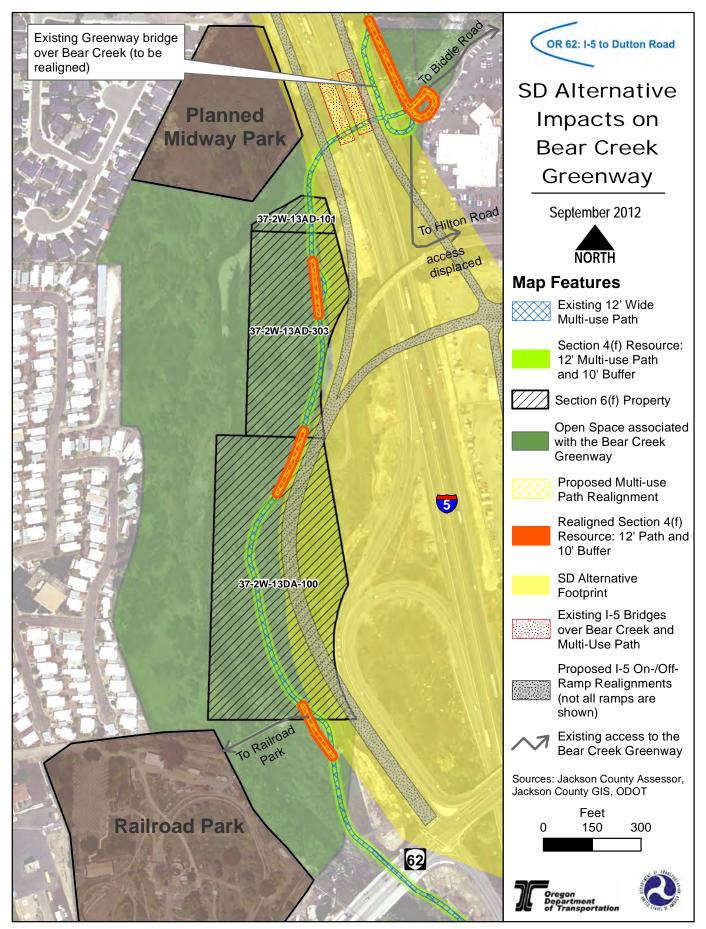
The bypass associated with the SD Alternative would cross the approximate alignment of the Swanson Creek Trail just south of Justice Road. At this point, the bypass would be located at grade level. There would be no pedestrian or bicycle crossings in the vicinity. This proposed trail is conceptual in nature, and is not included in the Medford Comprehensive Plan because it is largely outside the Medford city limits. ODOT met with Medford Parks Department on July 5, 2012, to confirm the level of planning for this trail. The intent of the trail is to provide a recreational connection between Prescott Park to the east of Medford and the Jackson County Exposition Park to the west of Medford. City of Medford Park's planners confirmed that the alignment shown on the Comprehensive Plan map and reproduced in Figure 3.6-5 is very conceptual and does not represent an actual, proposed location for the trail. The land on which the trail line is drawn is mostly privately owned.

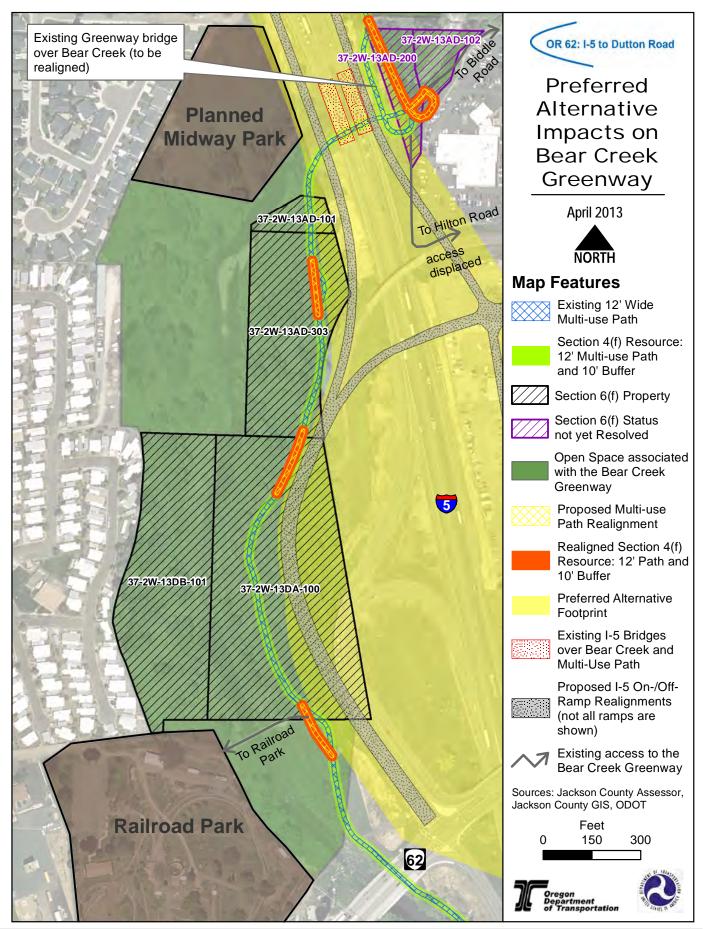
Between the existing OR 62 and Table Rock Road, the Swanson Creek Trail roughly parallels the proposed East Vilas Road Trail described below. Medford Park's planners agreed that the two trails could be combined in this area. If the trails were combined, they could cross under the proposed bypass at Vilas Road where there would be a grade-separated crossing, serving the purpose envisioned for the Swanson Creek Trail, of connecting Prescott Park and the Jackson County Exposition Park. If the trails were combined as describe, the project would not preclude the construction of a Swanson Creek Trail.

#### **East Vilas Road Trail (proposed)**

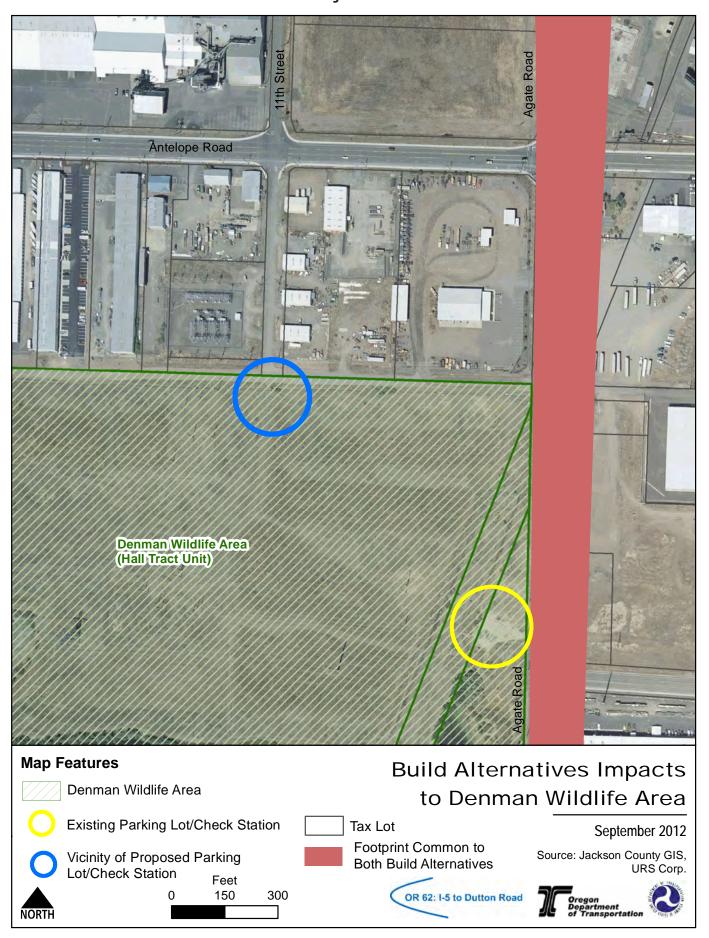
The bypass associated with the SD Alternative would cross over the proposed East Vilas Road Trail in the vicinity of the Medco Haul Road. The SD Alternative would

**Figure 3.6-6** 





**Figure 3.6-7** 



include an interchange between the bypass and Vilas Road. The SD Alternative would also widen Vilas Road to five lanes and add on-street bicycle lanes and sidewalks on both sides of Vilas Road between the existing OR 62 and Table Rock Road. ODOT met with Medford Park's planners on July 5, 2012 and the planners stated that the proposed East Vilas Road Trail was originally envisioned to be an off-street multi-use path; however, Medford Park's planners further confirmed that the on-street bicycle lanes and sidewalks on Vilas Road that are proposed as part of the OR 62 Project could serve as the proposed East Vilas Road Trail.

#### Medco Haul/Cedar Links Road Trail (proposed)

The bypass associated with the SD Alternative would be located generally where the Public Facilities Element of the Medford Comprehensive Plan proposes the Medco Haul/Cedar Links Road path to be located. As described in Section 3.6.2.3, the plan does not define a specific location, nor has the City of Medford acquired any land for this path.

ODOT consulted with the Medford Parks department to discuss the state of planning associated with this proposed trail. Medford Park's planners confirmed that construction of the SD Alternative would not necessarily preclude construction of the proposed path, but it could make siting the path more challenging. While the bypass itself would provide a north-south transportation connection for pedestrians and bicyclists, it would not fulfill the role of a recreational trail.

#### **Crater Lake Hwy Trail (proposed)**

The Crater Lake Hwy Trail is shown in the vicinity of the existing OR 62 and Crater Lake Avenue. The SD Alternative would not directly impact this proposed trail.

#### **Hopkins Creek Trail (proposed)**

The SD Alternative would not directly impact the proposed Hopkins Creek Trail.

#### **DI Alternative**

The DI Alternative would impact the Denman Wildlife Area, but would not impact the Bear Creek Greenway, Railroad Park or the planned Midway Park. The DI Alternative would require the use of some land in the vicinity of the proposed Whittle Avenue Park but would not impact the proposed park. Like the SD Alternative, the DI Alternative would be located in the vicinity of the proposed Medco Haul/Cedar Links Road Trail and would cross the proposed Swanson Creek and East Vilas Road Trails. It would not directly impact the other proposed Crater Lake Highway or Hopkins Creek Trails.

#### **Denman Wildlife Area**

The DI Alternative would result in the same impacts on the Denman Wildlife Area as the SD Alternative.

#### **Whittle Avenue Park (proposed)**

The DI Alternative would extend Corona Avenue north to connect to Skypark Drive, which would use 0.4 acres of undeveloped land in the vicinity of the proposed Whittle Avenue Park as shown in Figure 3.6-4. Currently, the undeveloped land parcel is 47.0 acres. The DI Alternative would reduce the undeveloped area by approximately 0.4 acres, leaving a 46.6-acre parcel. To date, the City of Medford has only identified the general vicinity for the proposed park. According to the Public Facilities Element of the Medford Comprehensive Plan, the optimum size for a neighborhood park is three to five acres (City of Medford 2010). Based on the location of Whittle Park and that it is outside the API, it has been determined that there would be no effect to proposed Whittle Park from the DI Alternative.

## Swanson Creek Trail, East Vilas Road Trail, and Medco Haul/Cedar Links Road Trail (proposed)

The DI Alternative would result in the same impacts to these three proposed trails as the SD Alternative.

#### Crater Lake Hwy Trail and Hopkins Creek Trail (proposed)

The DI Alternative would not directly impact either of these proposed trails.

#### **JTA Phase**

The JTA phase would result in the same impacts to the proposed Medco Haul/Cedar Links Road path as the SD Alternative, described above. There are no Section 4(f) or Section 6(f) impacts associated with the JTA phase.

#### 3.6.3.2 Indirect Impacts

#### **No Build Alternative**

The No Build Alternative would not involve any construction related to this project. Congestion and safety problems on existing OR 62 would remain and will increase, which will reduce mobility and make travel to and from parks more difficult.

#### **Impacts Common to Both Build Alternatives**

The SD and DI Alternatives would have similar, minor indirect impacts. Both build alternatives could have a minor effect on routes to and from parks near the southern terminus of the proposed project as a result of changes to the local street network shown in Figure 3.6-1. As described in Section 3.2, Land Use, the build alternatives would likely accelerate land development allowed by the Medford, Eagle Point, and Jackson County comprehensive plans, including within the White City UUCB, and reduce constraints on plan amendments and zone changes to allow larger-scale development within the Medford and Eagle Point UGBs. Larger scale residential development could increase the need for additional parks. The Medford Comprehensive Plan accounts for population increases and includes plans for new parks. Any growth induced by either build alternative could shorten the timeframe for adding new parks but would not overload the parks system.

#### 3.6.3.3 Construction Impacts

#### **No Build Alternative**

Under the No Build Alternative, there would be no construction associated with this project, and no construction impacts.

#### **SD Alternative**

Construction of the SD Alternative would affect the Bear Creek Greenway. During construction of the I-5 ramp bridges, the Greenway path could be closed on a short-term, temporary basis. Path closures would be limited to periods when required to ensure public safety, such as when materials are being hoisted overhead or when other overhead construction activities occur. Path closures for overhead construction work would last one day or less, and would be minimized to the greatest extent possible. Construction techniques and schedules have not yet been designed for the SD Alternative. Based on experience with similar projects, engineers have confirmed that only single-day (or shorter) path closures would be needed, and that those closures would be relatively infrequent. Once detailed construction schedules are developed, any necessary path closure schedules would be coordinated with the City of Medford, Bear Creek Greenway representatives and the public. To the greatest extent possible, such closures would be scheduled for times when the path is less heavily used, typically during the night. The closure schedule would be advertised to the public in advance, and ODOT would provide directional signage for alternate northbound and southbound routes around the closed segments of the path.

In addition to the single-day path closures, there may also be periodic short-duration path closures of 15 minutes or less when construction crews need to cross the path with construction equipment or materials. These short-duration closures would be minimized to the greatest extent possible. In the case of a short-duration closure, ODOT would provide flaggers.

#### **Impacts Common to Both Build Alternatives**

Except for construction associated with moving the existing parking area off of Agate Road, construction related to the proposed bypass and access roads associated with the SD Alternative and the DI Alternative would take place outside of the Denman Wildlife Area, but would occur immediately adjacent to the Denman Wildlife Area on the existing Agate Road. Construction activity within the Denman Wildlife Area (associated with moving the parking area) or outside the Denman Wildlife Area (associated with building the proposed bypass and access roads) could potentially impact the area if storm water from the construction area were to run on to the Hall Tract, or from dust or noise caused by the nearby construction. Construction Best Management Practices (BMPs) designed to avoid or reduce these impacts (discussed in more detail in Sections 3.10 and 3.16) would be used to avoid construction-related impacts on the Denman Wildlife Area.

# 3.6.3.4 Resources Evaluated Relative to the Requirements of Section 4(f)

#### **No Build Alternative**

The No Build Alternative would not use Section 4(f) resources because none of the proposed project facilities would be constructed.

#### **SD Alternative**

The SD Alternative would use three Section 4(f) resources: the Bear Creek Greenway, the planned Midway Park, and the Denman Wildlife Area. All three of these uses are minor and likely to be determined to be *de minimis*. *De minimis* impacts on publicly owned parks, recreation areas, and wildlife refuges are defined as those that do not "adversely affect the activities, features and attributes" of the Section 4(f) resource. The required comment period for these three proposed *de minimis* assessments was held prior to publication of the FEIS. The preliminary *de minimis* assessments for the Denman Wildlife Refuge, the Bear Creek Greenway, and the planned Midway Park were included in Appendix E of the DEIS. FHWA will make final Section 4(f) determinations on these three resources after comments are received.

FHWA has considered comments received during the public comment period and made final Section 4(f) *de minimis* determinations for the Denman Wildlife Refuge, the Bear Creek Greenway, and the planned Midway Park. The final Section 4(f) *de minimis* determinations for each property are included in Appendix E.

#### **Bear Creek Greenway**

As described in Section 3.6.3.1 and shown in Figure 3.6-6, the SD Alternative would displace some segments of the Greenway path and require the use of approximately 0.1 acres of the Bear Creek Greenway path and buffer. In areas where the path would be displaced, ODOT would slightly move the path to the west to ensure that the recreational activities, features and attributes are not adversely affected. The shifted sections of the path would be the same width and use the same materials and construction methods as the existing path.

FHWA has considered comments received during the public comment period and made a final Section 4(f) *de minimis* determination for the Bear Creek Greenway. The final Section 4(f) *de minimis* determination is included in Appendix E.

#### **Planned Midway Park**

As described in Section 3.6.3.1 and shown in Figure 3.6-6, the SD Alternative would require the use of approximately 0.15 acres of Medford-owned land on which Midway Park is planned to be built.

FHWA has considered comments received during the public comment period and made a final Section 4(f) *de minimis* determination for the planned Midway Park. The final Section 4(f) *de minimis* determination is included in Appendix E.

#### **Section 4(f) Use Common to Both Build Alternatives**

#### **Denman Wildlife Area**

As described in Section 3.6.3.1 and shown in Figure 3.6-7, both build alternatives would close the Denman Wildlife Area's Agate Road parking lot and check station. ODOT would provide a new, equivalent parking lot and check station. The new parking lot location would not adversely affect the activities, features, or attributes of the Denman Wildlife area. The change would be minor and is likely to be considered *de minimis*. FHWA sought comment on the proposed *de minimis* assessment. Appendix E provides the *de minimis* finding for the Denman Wildlife Area.

FHWA has considered comments received during the public comment period and made a final Section 4(f) *de minimis* determination for the Denman Wildlife Refuge. The final Section 4(f) *de minimis* determination is included in Appendix E.

#### **Section 4(f) Considerations**

As described above, the SD Alternative would have a Section 4(f) use of the Bear Creek Greenway and the planned Midway Park, while the DI Alternative would not. Both alternatives would have an identical Section 4(f) use of the Denman Wildlife Area.

If, after receiving comments, FHWA determines that the SD Alternative's Section 4(f) use of the Bear Creek Greenway and the planned Midway Park is *de minimis*, there would be no Section 4(f)-related restriction on the identification of a Preferred Alternative. However, if FHWA determines that the SD Alternative's impacts on the Bear Creek Greenway and the planned Midway Park are too great to be considered *de minimis*, the SD Alternative could not be identified as the Preferred Alternative so long as the DI Alternative is considered to be the prudent and feasible avoidance alternative.

FHWA has considered comments received during the public comment period and made final Section 4(f) de minimis determinations for the Denman Wildlife Refuge, the Bear Creek Greenway, and the planned Midway Park. The final Section 4(f) de minimis determinations for each property are included in Appendix E.

# 3.6.3.5 Resources Evaluated Relative to the Requirements of Section 6(f)

#### **No Build Alternative**

The No Build Alternative would not use Section 6(f) resources because there would be no action or construction associated with this alternative.

#### **SD Alternative**

As described in Section 3.6.3.1, the SD Alternative would require the use of approximately 1.3 acres of land that was purchased using LWCF grants. Table 3.6-2 lists tax lots that were purchased using LWCF grants, the size of each tax lot, the size of the 6(f) use, and the preliminary estimated value of the 6(f) use. Figure 3.6-2 shows the location of the tax lots. As noted in the table, estimated use and values are based on concept-level plans and the 2010 Jackson County Assessor's real market values. The estimated values only include the fee acquisition costs, not the value of improvements or costs associated with contingencies, appraisals, legal fees, or other such expenses included in the right-of-way technical analysis. Improvements on the city-owned land are primarily the Bear Creek Greenway, which ODOT would replace. Individual appraisals have not been conducted yet If the SD Alternative were identified as the Preferred Alternative, ODOT would conduct appraisals of the value of the 6(f) impacts and develop more precise calculations of the size of 6(f) use based on more refined project designs.

As stated in Section 3.6.3.1, the U.S. Department of Interior commented on the DEIS that their records indicate that the parcels of land in the northeast corner of Figures 3.6-2 and 3.6-6 are encumbered by Section 6(f), as now shown in Figures 3.6-2 FEIS and 3.6-6 FEIS (parcels 37-2W-13AD-102 and 37-2W-13AD-200). However, ODOT and Jackson County records do not show that these parcels have received LWCF Act funding. Therefore, the DEIS did not identify these parcels as Section 6(f) lands. ODOT will continue to work with NPS and the Oregon Parks and Recreation Department to resolve the status of these parcels. This resolution will occur as part of final design and property acquisition and will determine the precise amount of Section 6(f) land that will be converted and require replacement. Table 3.6.2 now includes parcel 37-2W-13AD-200 with a descriptive note. Parcel 37-2W-13AD-102 will not be a 6(f) impact, even if it is determined that this parcel is encumbered by Section 6(f), because any impact to parcel 37-2W-13AD-102 will be limited to the relocation of the existing Bear Creek Greenway path, which would not constitute a 6(f) use.

Table 3.6-2 Use of Section 6(f) Land by the SD Alternative

Taxlot	Taxlot Size (sq. ft.)	Area Used by SD Alternative (sq. ft.)	Preliminary Estimated Value of Area Use <sup>1</sup>	
37-2W-13AD-303	164,850	8,969	\$4,036	
37-2W-13AD-101	20,528	1,891	\$850	
37-2W-13DA-100 <sup>2</sup>	362,500	45,340	\$90,680	
37-2W-13AD-200 <sup>3</sup>	37,869³	15,712³	\$3,3903,4	
Total	547,878 585,747 <sup>3</sup>	56,200 71,912³	\$95,566 \$98,956³	

<sup>&</sup>lt;sup>1</sup>The preliminary estimated values of the 6(f) use are the fee acquisition costs as listed in the estimated right-of-way costs prepared for the project. These cost estimates do not include contingencies or improvement costs. Estimates are based on concept-level plans and 2010 Jackson County Assessor's real market values. Individual appraisals have not been conducted.

If the SD Alternative is identified as the Preferred Alternative, ODOT will coordinate with the Bear Creek Greenway consortium to identify potential replacement properties. Section 6(f) requires that replacement land be of at least equal fair market value as the displaced land, and that the replacement land is of reasonably equivalent usefulness and location. However, Section 6(f) allows some flexibility in where replacement property is located, so long as the replacement property meets existing outdoor recreation needs and serves the same communities as the displaced site. The replacement land does not need to be adjacent to the area where land was displaced. The Bear Creek Greenway management plan recommends extending the multi-use path to connect to other existing and proposed multi-use paths, so there are a number of potential replacement sites that would provide equivalent usefulness for the people in the area who now use the Bear Creek Greenway path.

Because the SD Alternative has been identified as the Preferred Alternative, ODOT will coordinate with the Bear Creek Greenway consortium, Oregon Parks and Recreation Department and National Park Service to identify potential Section 6(f) replacement properties in advance of the design and construction of the Preferred Alternative.

#### **DI Alternative**

There are no Section 6(f) impacts associated with the DI Alternative.

<sup>&</sup>lt;sup>2</sup> A portion of this parcel (1.3 acres, or 56,933 sq. ft.) is currently undergoing a Section 6(f) conversion due to impacts from a previous North Medford Interchange improvement project. The estimates contained in the right-of-way technical analysis did not deduct that area from the right-of-way impacts because the conversion has not yet occurred. The 6(f) use listed in this table does not include that land, and only includes new 6(f) use.

<sup>&</sup>lt;sup>3</sup> While NPS records indicate this property has received LWCF Act funding, Jackson County records do not indicate receipt of funding. The resolution of the Section 6(f) status will occur prior to final design and property acquisition, and will determine the precise amount of Section 6(f) land that will be converted and require replacement.

Parcel 37-2W-13AD-200 is owned by ODOT and, therefore, would have no fee acquisition costs associated with it. The preliminary estimated value for the portion of this lot used for the Preferred Alternative was estimated based on the Jackson County Assessor's real market value for the parcel and the proportion of the parcel that would be used by the project.

# 3.6.4 Avoidance, Minimization and/or Mitigation

#### Denman Wildlife Area

During project development, ODOT directed project engineers to avoid impacts to the Denman Wildlife Area. Although project engineers were able to design the build alternatives so that there would be no right-of-way impacts to the Hall Tract Unit of the Denman Wildlife Area, there was no reasonable way to continue to provide access to the existing parking lot and check station. Allowing direct access from the proposed bypass would be in violation of ODOT access management policies and would be extremely unsafe. Constructing a new access road from an existing local street to the parking lot would have resulted in greater impacts to the wildlife area (from additional new impervious surface) than the proposed strategy of relocating the parking lot and check station.

The project would build a new parking lot and check station to mitigate impacts on the Denman Wildlife Area. The new parking lot would be built on the north side of the Hall Tract, at the southern end of 11th Street, as shown with the blue circle on Figure 3.6-7. The new parking lot would be sited approximately 1,800 feet northwest of the existing parking lot, and access to the ponds in the western portion of the Hall Tract would be comparable to existing conditions. The project would also relocate the check station to the new parking lot. The new parking lot should be constructed and open for public use before the existing parking lot is closed. ODOT coordinated with ODFW officials regarding the relocation of the parking lot and check station to ensure that this strategy would be sufficient mitigation for the parking lot closure.

#### **Bear Creek Greenway**

During project development, ODOT directed project engineers to avoid or minimize impacts to the Bear Creek Greenway. Engineers designed the split diamond interchange and its ramps as tightly as possible while still complying with roadway design standards. In spite of these efforts, there would be short segments of the path that would need to be shifted slightly to the west; shifting the path is included in the project to ensure that the recreational uses are not impacted.

Potential mitigation strategies for the Bear Creek Greenway include improving directional signs on nearby roads to guide cyclists and pedestrians to and from the Bear Creek Greenway's multi-use path, and adding a connection between the multi-use path and OR 62 where OR 62 crosses over the path (just west of the I-5 southbound off-ramp).

#### **Midway Park (planned)**

As with the Bear Creek Greenway, ODOT directed project engineers to avoid or minimize impacts to the planned Midway Park lands. ODOT has coordinated with the Medford Parks department to ensure that plans for the development of Midway Park would not be impacted.

# 3.6.5 Avoidance, Minimization and/or Mitigation Commitments Incorporated into the Preferred Alternative

ODOT makes the following commitments.

#### JTA Phase

There are no mitigation commitments exclusive to the JTA phase.

### JTA Phase and Preferred Alternative Subsequent to Construction of the JTA Phase

There are no mitigation commitments applicable to both the JTA phase and the Preferred Alternative.

#### **Preferred Alternative Subsequent to Construction of the JTA Phase**

- ODOT will construct a new parking lot and check station for the Denman Wildlife Area on the north side of the Hall Tract, at the southern end of 11th Avenue.
- ODOT will provide directional signage to guide visitors to the new parking lot location for the Denman Wildlife Area.
- ODOT will restore the existing Denman Wildlife Area parking lot site with native vegetation.
- ODOT will work with the Rogue Valley Audubon Society to incorporate measures to avoid and mitigate impacts on birds where the bypass is adjacent to the Hall Tract.
- ODOT will minimize the impact to the Bear Creek Greenway by using retaining walls instead of fill slopes wherever practical.
- In the area where the Bear Creek Greenway trail is located on the west side of I-5, ODOT will shift the Bear Creek Greenway trail slightly to the west to ensure that the recreational uses are not impacted.
- ODOT will replace the existing Greenway path bridge located on the east side of I-5 with one located farther east. ODOT will also rebuild the path to connect to the new bridge. The new bridge and path connections will be built prior to removing the existing bridge over Bear Creek to allow the path to remain open during the bridge realignment work.
- ODOT will require that during project construction, path closures will last one day or less, and will be minimized to the greatest extent possible. Such closures will only occur when necessary to ensure public safety, such as when materials are being hoisted overhead or when overhead construction activities occur. Short-term path closures, such as when construction crews need to temporarily stop path traffic to allow construction equipment to cross the path, will last 15 minutes or less and will also be minimized.
- ODOT will coordinate with the City of Medford and Greenway representatives to develop a schedule for path closures and will advertise those closures to the public in advance. To the greatest extent possible, such closures will be scheduled for times when the path is less heavily used.
- During project construction, ODOT will provide directional signage for alternate northbound and southbound routes around the closed segments of the path.
- As required by Section 6(f) of the LWCA, prior to construction of a phase that would impact the Bear Creek Greenway, ODOT will provide land to replace the approximately 1.3 to 1.6 acres (depending upon outcome of Section 6(f) status for parcels) of Bear Creek Greenway land that was acquired and/or developed with LWCA funds.
- ODOT will include improved directional signs on nearby roads to guide cyclists and pedestrians to and from the Bear Creek Greenway trail.
- In the vicinity where the OR 62: I-5 to Dutton Road project intersects with the Bear Creek Greenway trail, ODOT will improve navigational signage on the local street network to help bicyclists and pedestrians find a safe route to the Bear Creek Greenway trail.
- In places where the Bear Creek Greenway trail will be realigned, ODOT will ensure that the new segments preserve the recreational experience, including avoiding sharp turns and designing gentle curves that are in harmony with the existing topography and landscape.
- In places where the Bear Creek Greenway trail will be realigned, ODOT will construct the new segments using techniques and materials that will avoid future upheavals or potholes created by tree roots or soil movement.
- In places where there will be new construction or ground disturbance near the Bear Creek Greenway, ODOT will install landscaping that is native to Bear Creek to screen the new construction and cover the disturbed ground.
- ODOT will design all new bridges over Bear Creek to be visually compatible with the surroundings, using pigments to darken concrete, adding texture to large expanses of concrete, and avoiding use of bare galvanized metal on railings, sign posts, or light posts that are visible from the Bear Creek Greenway.
- ODOT will build a noise barrier between the planned Midway Park and I-5 to mitigate for the displacement of a planned noise-reducing berm.
- ODOT will continue to coordinate with the Medford Parks department to ensure that any design changes to the project do not impact plans to develop Midway Park.

#### **Section 3.7 Content**

- 3.7.1 Regulatory Setting
- 3.7.2 Affected Environment
  - 3.7.2.1 Historic Resources Evaluated
  - 3.7.2.2 Eligible Properties
  - 3.7.2.3 Archaeological Resources
- 3.7.3 Environmental Consequences
  - 3.7.3.1 Direct Impacts
  - 3.7.3.2 Indirect Impacts
  - 3.7.3.3 Construction Impacts
  - 3.7.3.4 Resources Evaluated Relative to the Requirements of Section 4(f)
- 3.7.4 Avoidance, Minimization, and/or Mitigation Measures
  - 3.7.4.1 Historic Resources
  - 3.7.4.2 Archaeological Resources
- 3.7.5 Avoidance, Minimization, and/or Mitigation Commitments Incorporated Into the Preferred Alternative

# 3.7

#### 3.7 Cultural Resources

#### 3.7.1 Regulatory Setting

The National Historic Preservation Act of 1966 (NHPA), as amended, sets forth national policy and procedures regarding historic properties, defined as districts, sites, buildings, structures, and objects included in, or eligible for, the National Register of Historic Places (NRHP). Section 106 of NHPA requires federal agencies to take into account the effects of their undertakings on such properties and to allow the Advisory Council on Historic Preservation (ACHP) the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation (36 CFR 800).

In 2011, a Section 106 Programmatic Agreement (PA) between the ACHP, FHWA, the Oregon State Historic Preservation Officer (SHPO), and ODOT was executed which outlines program-level requirements and alternative Section 106 compliance processes.

Section 106 of the National Historic Preservation Act, as amended, and Executive Order 11593 Protection and Enhancement of the Cultural Environment, require that federally licensed and federally assisted projects be examined for impacts on all historic districts, sites, buildings, structures or objects. Federal agencies must consult with SHPO and other consulting parties before undertaking projects that could affect such properties.

The Archaeological Resources Protection Act (ARPA) applies when a project may involve archaeological resources located on federal or tribal land. ARPA requires that a permit be obtained before excavation of an archaeological resource on such land can take place.

Archaeological resources are also protected under Oregon Revised Statutes 390.235 which requires a permit for excavation and/or exploration of archaeological resources on public lands and Oregon Administrative Rule 736-051-0080 & 0090 for protection of archaeological resources on public and private lands. In addition to the archaeological protections, Oregon Revised Statute 97.740 was established to protect Indian graves and sacred objects.

Section 4(f) of the Department of Transportation Act of 1966, declares that "it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation

lands, wildlife and waterfowl refuges, and historic sites." Section 4(f) specifies that the Secretary of Transportation may approve a transportation program or project requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

- 1. there is no prudent and feasible alternative to using that land; and
- 2. the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use; or
- 3. the Administration determines that the use of the property, including any measures to minimize harm committed to by the application will have a *de minimis* impact as defined in 23 CFR 774.117.

Section 4(f) further requires consultation with the Department of the Interior and, as appropriate, the involved offices of the Departments of Agriculture and Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f). If NRHP-listed or eligible sites are involved, then coordination with SHPO or Tribal Historic Preservation Officer is also needed.

#### 3.7.2 Affected Environment

The historic resources Area of Potential Effect (APE) for the project is defined as the parcels adjacent to any proposed or reconstructed roadway or other area where project construction could occur under any of the build alternatives, design options, or JTA phase. This historic APE definition was developed in consultation with the SHPO. Figure 3.7-1 shows the historic APE.

#### 3.7.2.1 Historic Resources Evaluated

Seven resources within the historic APE are old enough (50 years) to meet the NRHP age threshold for historic resources and appeared to be worth further study to determine whether they would be considered historic. These resources were identified through a reconnaissance survey and search of SHPO and Jackson County records. No NRHP-listed resources were found within the historic APE; however two resources had been determined eligible in 1996. These resources are the Camp White Station Hospital and the David Cingcade House and Barn Complex (Cingcade Complex), as listed in Table 3.7-1. The remaining five resources were assessed for their integrity, condition, and potential for meeting NRHP criteria and were all determined not to be eligible for listing in the National Register of Historic Places. Table 3.7-1 lists the seven resources assessed, the type of resource and date it was built, and whether it is considered historic. Figure 3.7-1 shows the locations of the properties that were evaluated.

For further information regarding historic resources, including citations to source documents, refer to the *OR 62 Corridor Solutions Project Historic Resources Technical Report*, August 2011. This report is available from the ODOT contact person identified on page i of this EIS

Table 3.7-1 Resources Evaluated For The National Register of Historic Places

Resource Name (if applicable) and Address or Tax Lot	Resource Type Date	Status	
Camp White Station Hospital (8495 OR 62)	Military Hospital, 1942	Determined Eligible for the NRHP (1996 & 2011)	
Cingcade Complex (60 West Dutton Road)	House and Barns, 1895	Determined Eligible for the NRHP (1996 & 2011)	
Eugene F. Burrill Lumber Mill (8425 Agate Road)	Lumber Mill, 1953	Determined Not Eligible for the NRHP due to irretrievable integrity loss (2008)	
2547 Corona Avenue	House, c. 1900	Demolished	
2511 Corona Avenue	House, c. 1952	Demolished	
983 E. Vilas Road <sup>1</sup>	House and Barns, c. 1921	Insufficient integrity	
361W31D #19001	Barn, c. 1928	Extremely poor condition; insufficient significance	

<sup>&</sup>lt;sup>1</sup> Resources were evaluated in baseline report and found in such poor condition that a Determination of Eligibility was not prepared. Source: Historic Resources Technical Report

**Figure 3.7-1** 

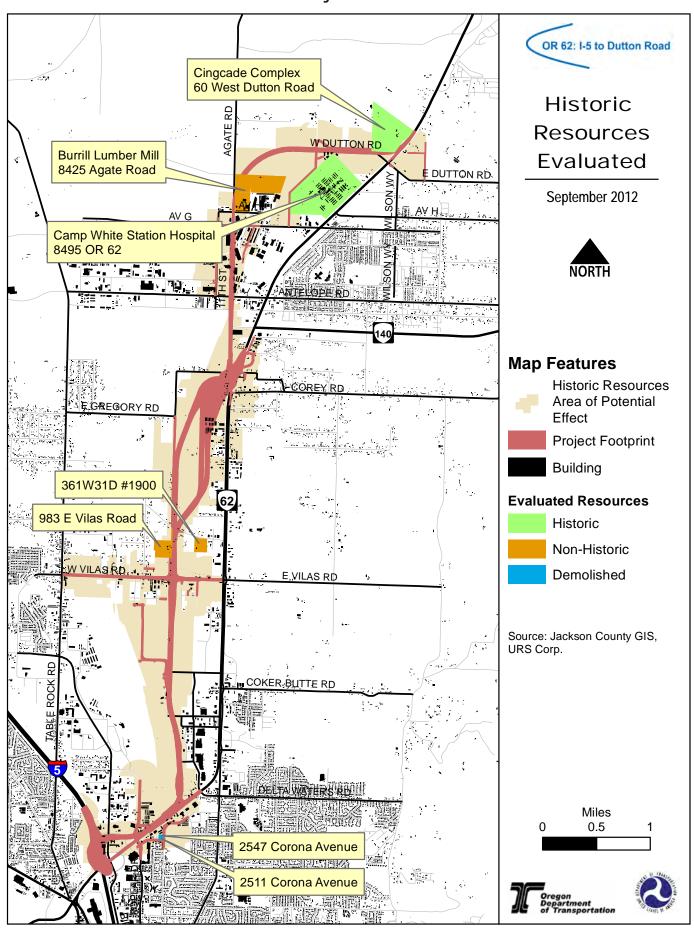
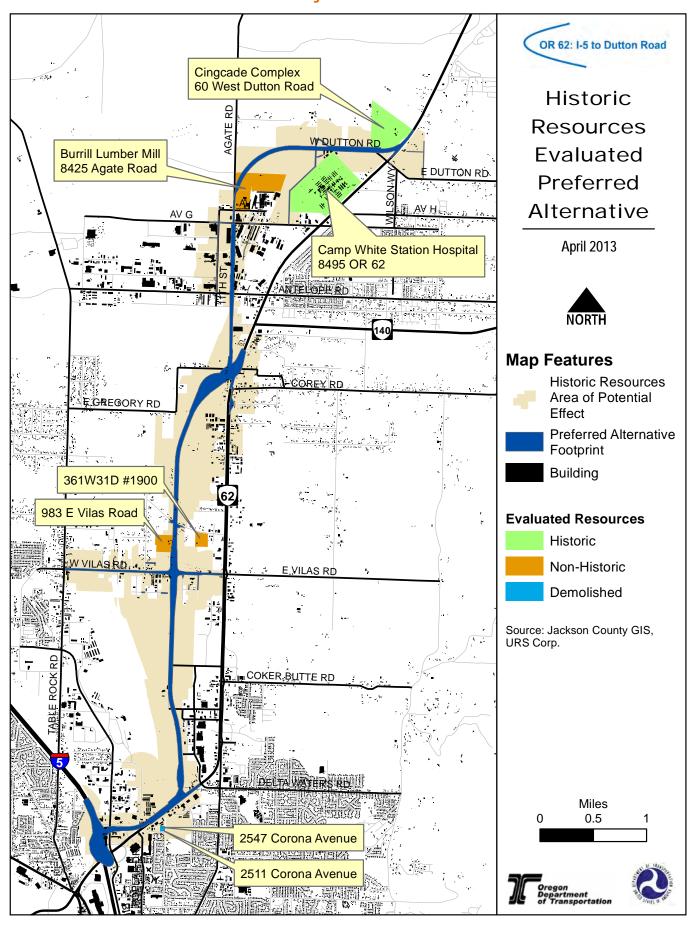


Figure 3.7-1 FEIS



#### 3.7.2.2 Eligible Properties

Two properties within the historic resources APE have been determined eligible for the NRHP. Resources determined as eligible for listing in the NRHP have the same status as a listed property. The eligible properties are described in more detail below.

#### **Camp White Station Hospital**

The Camp White Station Hospital is now part of the Veterans Administration Southern Oregon Rehabilitation Center and Clinics (VA SORCC), but it was originally the hospital complex for Camp White, a World War II (WWII) military training facility. The Camp White Station Hospital was determined eligible for the NRHP in 1996 as part of Section 106 analysis for a prior OR 62 widening project between White City and Eagle Point. Field visits conducted in 2007 confirmed that this complex is still eligible. SHPO concurred with the 2010 addendum to the original 1996 Determination of Eligibility (DOE). Although the 2010 addendum defined the boundaries of the historic resource to exclude the undeveloped land around the perimeter of the tax parcel and the non-historic golf course, the SHPO did not concur with those boundaries because of an existing agreement between the SHPO and the VA SORCC. That existing agreement covers the entire tax parcel. Therefore, the boundary of the historic resource is considered to be the full tax parcel on which the VA SORCC is located. See Appendix F for the signed DOE, as amended. Camp White Station Hospital is considered a historic resource.

Figure 3.7-2 shows a typical building in the Camp White Station Hospital. The 1996 DOE form, included in Appendix F, describes Camp White Station Hospital's primary significance as:

[The] most intact surviving element of the WWII-era U.S. Army Camp White, a massive cantonment or training facility constructed from January to September 1942. [The facility has a] Strong association with the impact of Camp White on the Medford-Jackson County region and the economic and social impacts of the base's construction, operation, and eventually, the 1949 transformation of the Camp White Station Hospital into the Veteran's Affairs Domiciliary.

When Camp White was an active training facility, it covered 43,000 acres or roughly 77 square miles. After WWII, the military decommissioned the camp. Nearly all of the buildings were auctioned off with the requirement that the buyers had to completely remove the wooden buildings and their foundation from the site. Most of the 43,000 acres of the original camp were also sold. The eastern half of Camp White became what is now the residential section of White City and the western half is the White City industrial area.

The Camp White historic resource contains a complex of brick buildings; J, L, and N Avenues, and Hospital Road that form the historic resource perimeter; and a roadway network within the historic resource boundary that were all part of the original Camp White and remain intact. Camp White's location relative to the project is shown on Figure 3.7-1.

Figure 3.7-2 Camp White Station Hospital typical building



#### **Cingcade Complex**

The Cingcade Complex is a farmstead. It was determined eligible for the NRHP in 1996 as part of Section 106 analysis for a prior OR 62 widening project between White City and Eagle Point. The 1996 DOE, included in Appendix F, states the following:

The David Cingcade House and Barn Complex, constructed circa 1895 by the prominent Cingcade family, is significant both as an early example of vernacular homestead architecture and through its association with the late 19th century and early 20th century agricultural and livestock-raising activities in the Agate Desert/Eagle Point Area, the primary economic activity in the region prior to WWII.

Since 1996, the complex has only had minor changes, including the addition of some outbuildings between the house and barn and the expansion of the central barn door opening. Figure 3.7-3 shows the house and barn, as viewed from the southeast (looking northwest). Aside from these minor alterations, the house and barn, as well as, the overall site, have retained enough integrity to continue to be considered eligible for the NRHP. Changes that have occurred since the 1996 DOE are documented in the 2010 DOE addendum, included in Appendix F. This farmstead is considered a historic resource.

The size of the Cingcade Complex has decreased over the years. Originally, it was a 360-acre parcel, but over the years, the original parcel has been reduced to a 71-acre site on the northwest side of existing OR 62. The 2010 DOE addendum includes a map of the original Cingcade Complex and specifies that the historic resource boundary is the tax parcel on which the farmstead currently sits (71 acres). Figure 3.7-4 also shows the historic resource boundary of the Cingcade Complex.

Figure 3.7-3 Cingcade Complex



**Isolate** refers to up to nine artifacts discovered in a location that appears to reflect a single event or

activity. Isolate finds are not considered eligible resources under Section 106 of NHPA.

**Lithic** refers to remains associated with stone tools and tool-making, such as flakes or chips remaining from toolmaking.

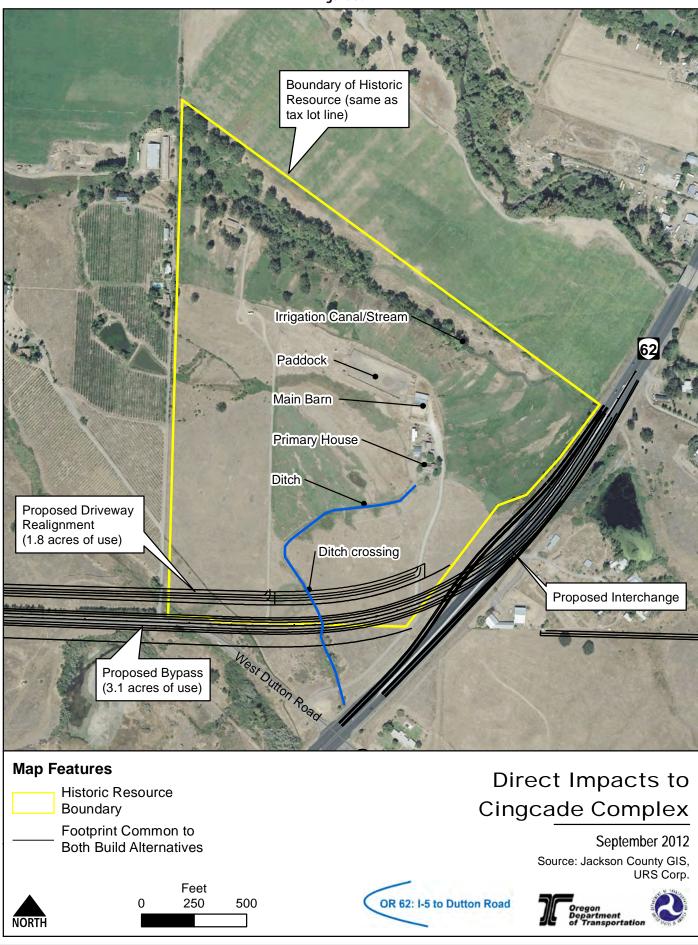
#### 3.7.2.3 Archaeological Resources

Known archaeological sites are located outside the archaeological resources APE (see Figure 3.7-5); however no significant historic or prehistoric archaeological resources were identified in the archaeological resources APE during field investigations that included pedestrian surveys and subsurface reconnaissance. A pedestrian survey of the project found the area has been impacted by industrial, commercial, military, and residential development. Large strips of land have been graded, filled, plowed, and covered with asphalt and cement. The resources identified during the pedestrian surveys included transient camps, can/bottle dumps, structural remains, irrigation equipment, railroad- and logging-related features, and prehistoric waste flakes. Most of these are either modern or of indeterminate age, although two are not—a prehistoric lithic isolate and a historic can/bottle isolate. Multiple shovel probes focused on areas most likely to yield buried cultural material. The shovel probes excavated at all areas failed to retrieve any evidence of prehistoric occupation.

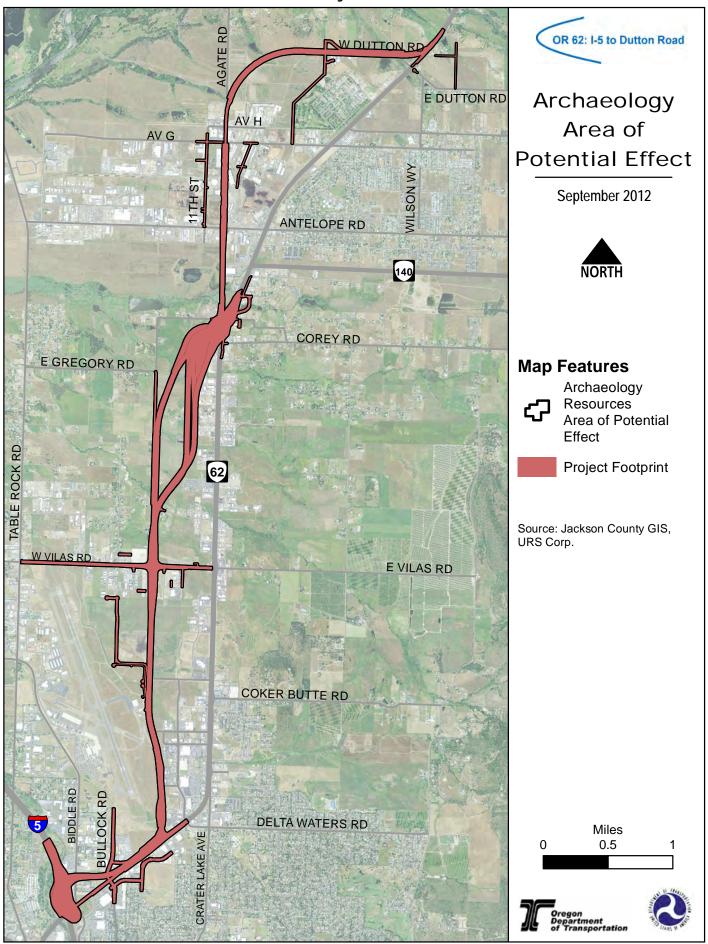
ODOT met with representatives of the Confederated Tribes of the Grand Ronde Community of Oregon to determine whether there were any Traditional Cultural Properties that would be impacted by the project. The Tribe did not identified any Traditional Cultural Properties near the project during these meetings.

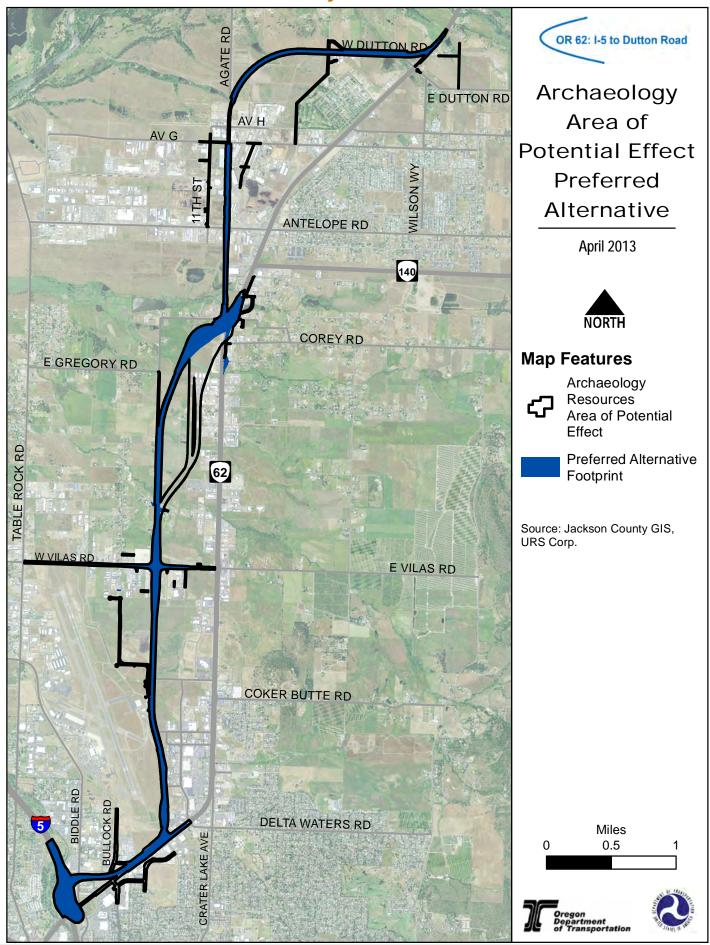
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**Figure 3.7-4** 



**Figure 3.7-5** 





Meetings with the Confederated Tribes of the Grand Ronde Community of Oregon occurred on the following dates: April 7, 2006; June 23,2006; December 6, 2006; June 1,2007; November 26, 2007; May 12, 2008; November 5, 2008; August 27, 2009; December 11, 2009; May 3, 2011; November 10, 2011; and May 14 2012. During the 2011 and 2012 meetings, ODOT also discussed the JTA phase.

ODOT met with representatives of the Confederated Tribes of Siletz to determine whether there were any Traditional Cultural Properties that would be impacted by the project. The Tribe did not identified any Traditional Cultural Properties near the project during these meetings.

Meetings with the Confederated Tribes of Siletz occurred on the following dates: November 2, 2006; November 20, 2007; December 8, 2008; December 16, 2009; March 23, 2011; and March 21, 2012.

Based on these meetings and coordination there are no Traditional Cultural Properties within the APE.

#### 3.7.3 Environmental Consequences

In compliance with Section 106 of the NHPA, this section contains an assessment of the level of effect (LOE) for the Camp White Station Hospital and the Cingcade Complex. The signed LOE forms are included in Appendix F. SHPO concurred with the findings, which are described below for each property and alternative.

#### 3.7.3.1 Direct Impacts

#### **Historic Resources**

#### No Build Alternative

Under the No Build Alternative, the proposed project would not be constructed, and, therefore, no historic resources would be affected.

#### **Build Alternatives**

Both historic resources are located in the northern portion of the Historic APE where the designs for the two build alternatives are identical. As a result, potential impacts are the same for both build alternatives.

#### Camp White Station Hospital

The April 6, 2011 LOE finding for Camp White Station Hospital is that there would be "No Historic Properties Adversely Affected" by either build alternative. Neither build alternative would require use of Camp White Station Hospital. With both build alternatives, a new local street would be constructed adjacent to, but outside of, the northwest boundary of the hospital's tax parcel (Figure 3.7-1). The proposed bypass would be located just north of the hospital's tax parcel.

#### Cingcade Complex

The February 9, 2011 LOE for Cingcade Complex is that there would be "No Historic Properties Adversely Affected" by either build alternative. Both build alternatives would require the use of approximately 4.9 acres of the southern edge of the historic resource property. A driveway would be relocated, but no buildings or historic structures would be displaced.

The Cingcade Complex would retain its historic character and setting. As shown in Figure 3.7-4, the proposed bypass would be located along the southern edge of the Cingcade Complex, roughly along West Dutton Road. The proposed bypass would be a four-lane access-controlled highway with center median and paved shoulders. The proposed bypass right-of-way would also include an unpaved clear zone; in all, the proposed bypass and its associated right-of-way would require the use of 3.1 acres of the historic resource. Because the proposed bypass would be located on existing West Dutton Road, a new local street would be built along the north side of the bypass for properties whose driveways are currently accessed via existing West Dutton Road. The proposed new driveway to the Cingcade Complex

could also impact the property shown in Figure 3.7-4. If either build alternative is selected as the Preferred Alternative, ODOT would coordinate with the current Cingcade Complex owners to determine the most appropriate design for the driveway relocation, which could result in lesser impacts than the design shown in Figure 3.7-4. As shown, the total right-of-way required for the proposed driveway would be 1.8 acres. The 1.8 acres would be in addition to the 3.1 acres required for the proposed bypass, for a total of 4.9 acres used. Section 3.7.3.4 describes the Section 4(f) *de minimis* finding for the Cingcade Complex.

#### **JTA Phase**

Because the northern terminus of the JTA phase would be over a mile south of the two historic resources, it would not directly impact either of the resources.

#### **Archaeological Resources**

There are no known archaeological sites within the archaeological resources APE, so no direct impacts on archaeological resources are anticipated for the No Build Alternative, either of the build alternatives, or JTA phase. SHPO concurrence for No Historic Properties Affected (Archaeology) was received on September 14, 2009, and is included in Appendix F.

#### 3.7.3.2 Indirect Impacts

#### **Historic Resources**

#### **No Build Alternative**

Indirect impacts under the No Build Alternative would be minimal. Under the No Build Alternative, traffic volumes on existing OR 62 would continue to increase, which could increase noise and reduce air quality at the Camp White Station Hospital.

#### **Build Alternatives**

As stated in Section 3.2.3.2, development or redevelopment in White City, allowed by the existing zoning, could be accelerated as a result of the proposed build alternatives. New development or redevelopment could lead to indirect impacts on the two historic resources. Indirect impacts could range from changing the setting in which the historic resources are located (the landscape would change from being relatively rural to being more suburban or urban) to threatening the historic resources themselves (owners of the historic resources themselves could decide to redevelop their land). Although similar indirect impacts could occur with the No Build Alternative, they could be accelerated by either build alternative. Indirect impacts on historic resources would be the same for either build alternative.

#### Camp White Station Hospital

Indirect impacts on Camp White Station Hospital associated with the build alternatives could include changes to the views from the property and changes in noise levels. Views north from the Hospital grounds would be minimally altered by the presence of the proposed bypass and new access roads. The changes to these views would be minor. Lighting along the proposed bypass and access road could also cause some minor visual impacts on the Camp White Station Hospital.

#### Cingcade Complex

Indirect impacts associated with the build alternatives to Cingcade Complex could include changes to views and noise levels. The Cingcade Complex is outside the current White City UUCB; therefore no plans for future housing subdivisions are expected. The view to the southeast from the Cingcade Complex would be modified to include a directional interchange, but views of the interchange from the buildings on the site would be limited and considered minor because there is a slight rise in ground level between where the interchange would be located and where the buildings are located. There could be increased noise levels and a decrease in air quality as a result of the increased traffic levels, but these changes would also be minor.

#### **JTA Phase**

Because the northern terminus of the JTA phase would be over a mile south of the two historic resources, it would not indirectly impact either of the resources.

#### **Archaeological Resources**

There are no known archaeological sites within the archaeological resources APE, so no indirect impacts on archaeological resources are anticipated for the No Build Alternative, either of the build alternatives, or JTA phase

#### 3.7.3.3 Construction Impacts

#### **Historic Resources**

#### No Build Alternative

Under the No Build Alternative, there would be no construction impacts.

#### **Build Alternatives**

#### Camp White Station Hospital

Construction impacts for either build alternative could include temporary detours in access to the Camp White Station Hospital, temporary changes to views, and temporary noise impacts. Construction would be located adjacent to the Hospital property, but would not impact any of the buildings associated with the Camp White Station Hospital. Construction activities would not create significant vibrations. Construction impacts such as noise and detours would be minor and temporary. They would not adversely affect the historic character of the Camp White Station Hospital. Refer to Section 3.17 Noise for details of noise and associated impacts.

#### Cingcade Complex

Construction impacts for either build alternative could include temporary detours in access to the Cingcade Complex and temporary noise impacts. Construction activities would be located close to the Cingcade Complex but would not be close to any historic buildings. People in and around the Cingcade Complex could experience temporary noise impacts from construction work, but this would not affect the historic integrity of the property. Construction activities would not create significant vibrations. Temporary construction detours in access to the Cingcade Complex may be necessary, but detours would be designed to allow continuous access to the property.

#### **JTA Phase**

Because the northern terminus of the JTA phase would be over a mile south of the two historic resources, there would be no construction impacts on either of the resources.

#### **Archaeological Resources**

There are no known archaeological sites within the archeological resources APE, so no construction impacts on archaeological resources are anticipated for the No Build Alternative, either of the build alternatives, or JTA phase.

# 3.7.3.4 Resources Evaluated Relative to the Requirements of Section 4(f)

The only Section 4(f) historic resource that would be used is a small portion of the Cingcade Complex. On December 16, 2011 FHWA concluded that the Section 4(f) impact is *de minimis*. The *de minimis* finding is included in Appendix E of this EIS.

As noted above, the build alternatives would use approximately 4.9 acres of land from the Cingcade Complex. The original Cingcade Complex comprised 360 acres, but it is now 71 acres. The bypass would use up to 3.1 acres, or 4% of the property.

The bypass and driveway combined would use 4.9 acres, or 7% of the total acreage. The reduction in the property acreage represents an incremental change that does not constitute an adverse impact. As documented in the Section 106 Level of Effect form, found in Appendix F, there would be "No Historic Properties Adversely Affected" by either of the build alternatives.

# 3.7.4 Avoidance, Minimization, and/or Mitigation Measures

#### 3.7.4.1 Historic Resources

#### **Direct Impacts**

#### **Camp White Station Hospital**

As a result of efforts to avoid impacts on Camp White Station Hospital, neither build alternative would require any use of Camp White Station Hospital. Lighting, signage, and other design details for the proposed roadway improvements have not yet been developed. If it is determined that lighting is necessary near the Camp White Station Hospital, lighting along the proposed bypass and local access road could be designed to minimize glare and impacts on the VA SORCC. The local street overpass, signage, guard rails, and fences could be designed to avoid or minimize visual impacts on the VA SORCC as well.

#### **Cingcade Complex**

Figure 3.7-4 shows the proposed driveway realignment. If one of the build alternatives is chosen, consultation with property owners may result in a different driveway realignment, which could result in a reduced impact. The proposed bypass design includes a cut slope near the southern portion of the Cingcade Complex. Right-of-way impacts on the resource could be reduced by using a retaining wall rather than a cut slope. Engineers may also find a way to shift the proposed bypass alignment slightly to the south, thus reducing the potential use of the property. Any changes to the proposed design would be documented in the Final EIS.

No changes to the proposed design have occurred in this area for the FEIS. Any design refinements to minimize the impact to the Cingcade Complex will occur in final design for the full-build phase after construction of the JTA phase is complete.

#### **Construction Impacts**

The following measures could be used to avoid, minimize, and mitigate direct construction impacts for both historic properties:

- Plan and schedule construction detours to minimize access impacts; and
- Locate construction staging areas away from the two historic sites.

If unevaluated archaeological materials are discovered during construction, all earth-moving activity within and around the immediate discovery area would cease and the historic materials would be protected until a qualified archaeologist could assess the nature and significance of the find.

If human remains are discovered, all earth moving activity related to the project would cease immediately. The immediate area surrounding the find would be protected and the state police and ODOT Archaeologist would be contacted.

#### 3.7.4.2 Archaeological Resources

If archaeological resources are discovered during construction, further research of the site and coordination with the SHPO would be necessary. ODOT's Standard Specifications for Highway Construction includes measures that are intended to safeguard potential archaeological sites that may be inadvertently discovered during construction.

#### 3.7.5 Avoidance, Minimization, and/or **Mitigation Commitments Incorporated into** the Preferred Alternative

ODOT makes the following commitments.

#### **JTA Phase**

There are no mitigation commitments exclusive to the JTA phase.

#### JTA Phase and Preferred Alternative Subsequent to **Construction of the JTA Phase**

There are no mitigation commitments applicable to both the JTA phase and the Preferred Alternative.

#### **Preferred Alternative Subsequent to Construction of the JTA Phase**

- ODOT will design any necessary lighting near the Camp White Station Hospital, either on the bypass or on the nearby local road, to minimize glare and impacts on
- ODOT will design any local street overpasses, signage, guard rails, or fences to avoid or minimize visual impacts on the VA SORCC.
- ODOT will minimize right-of-way impacts to the Cingcade Complex property by using a retaining wall rather than a cut slope where practical.
- If unevaluated archaeological materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will cease and the historic materials will be protected until a qualified archaeologist could assess the nature and significance of the find.
- If human remains are discovered, all earth moving activity related to the Project will cease immediately. The immediate area surrounding the find will be protected and the state police and Regional Archaeologist will be contacted.
- If archaeological resources are discovered during construction, further research of the site and coordination with the State Historic Preservation Office will be necessary. ODOT's Standard Specifications for Highway Construction includes measures that are intended to safeguard potential archaeological sites that may be inadvertently discovered during construction.

#### VISUAL

3.8

For further information regarding visual quality including citations to source documents, refer to the *OR 62 Corridor Solutions Project Visual Resources Technical Report*, May 2011. This report is available from the ODOT contact person identified on page i of this EIS. Additionally, FHWA's *Visual Impact Assessment for Highway Projects*, March 1988, is available online at:

http://
contextsensitivesolutions.
org/content/reading/visualimpact-2/resources/visualimpact-assessment/

#### **Section 3.8 Content**

3.8.1 Regulatory Setting
3.8.2 Affected Environment

3.8.2.1 Landscape Units

3.8.3 Environmental Consequences

3.8.3.1 Direct Impacts
3.8.3.2 Construction Impacts
3.8.3.3 Indirect Impacts

3.8.4 Avoidance, Minimization, and/or Mitigation Measures
3.8.5 Avoidance, Minimization, and/or Mitigation Commitments Incorporated Into the Preferred Alternative

#### 3.8 Visual Resources

The visual resources of a landscape are the elements (landforms, water, vegetation, development) which constitute the visual experience for the viewer. Highway projects can alter that visual experience by changing those elements or introducing contrasting elements that may affect the visual harmony of the landscape. This analysis will inventory the existing resources of the project area's visual environment and assess the impacts on the visual quality from implementation of the project alternatives.

#### 3.8.1 Regulatory Setting

NEPA establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, aesthetically (emphasis added) and culturally pleasing surroundings (42 U.S.C. 4331[b][2]). To further emphasize this point, the FHWA in its implementation of NEPA (23 U.S.C. 109[h]) directs that final decisions regarding projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

#### 3.8.2 Affected Environment

The general visual landscape or viewshed area is located in the Rogue River Valley of Southern Oregon. In this area, the valley floor is relatively flat, grassland plain surrounded by low rolling hills and the more distant Siskiyou Mountains. Except where views are obstructed by buildings or other man-made structures, the area in and around existing OR 62 is characterized by background views across the valley floor to the hills and mountains that ring the valley.

The area has experienced a large growth in population: subdivisions, shopping malls, and big box retailers are quickly replacing orchards, farmsteads, and open spaces. Vegetation in the developed areas is characterized by landscaping typical of urbanized areas: deciduous and evergreen street trees, residential lawns, and shrub plantings. In the rural portions of the project area, scattered stands of oak trees still dot the landscape and tall grass covers undeveloped areas.

Although the project area is located in the Rogue River Valley, the Rogue River is located to the north and west of the proposed project, well outside the visual resources study area. There are some wetlands and vernal pools scattered throughout the project area, primarily in undeveloped lands that have not been disturbed by earthmoving or livestock grazing.

The Medford Airport is located to the west of OR 62 between Delta Waters Road and Vilas Road, with the main runway ending just north of OR 62 in the vicinity of Skypark Drive. The area southeast of OR 62 is characterized by neighborhoods primarily consisting of detached single family houses built during the late twentieth century.

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Between Medford and White City, the OR 62 corridor is developed with a scattering of smaller commercial buildings, most of which are modestly-sized one- or twostory buildings situated behind asphalt or gravel parking lots. Further away from OR 62, land is developed in rural and semi-suburban patterns. Large expanses of grassland are punctuated by houses; in some places the houses are spaced far apart and have a truly rural feel. Along some of the more major roads, houses are more closely spaced, lending a more suburban appearance.

Farther north is White City, an urban unincorporated community bisected by OR 62. White City was originally Camp White, a WWII military training camp. After the war, nearly all of the buildings were removed. The VA SORCC is a 63-acre complex of buildings that once served as the Camp White Station Hospital. Today the complex provides in- and out-patient medical care to Veterans. Section 3.7 includes additional information about Camp White.

3.8.2.1 Landscape Units

The visual resource API is the area from which people would have a view of the proposed project. The API is divided into fourteen landscape units, based on the degree of development and the general appearance of the area. Figure 3.8-1 is a map of the API and the landscape units. Visual pattern elements are attributes of objects within the viewshed and include form, line, color, and texture of those objects. Pattern character attributes show visual contrasts based on dominance, scale, diversity, and continuity of the view. These attributes are used to establish the existing visual quality of the distinct landscapes. Table 3.8-1 provides a description of the existing visual quality of each landscape unit by reviewing the visual patterns and character of the landscape units and rating them based on how these elements contribute to the visual quality of the landscape units. The overall visual quality is then rated based on vividness (whether a view is particularly striking or uninteresting); intactness (whether there are a lot of obstructions); and unity (whether the buildings and vegetation harmonize or clash with each other). The visual quality is ranked on a score of 1 (very low) to 7 (very high) with 4 being average. Viewer response is composed of two elements; viewer sensitivity and viewer exposure. These elements combine to form a method of predicting how the public might react to visual changes. Viewer sensitivity is the viewer concern for the scenic quality and their responses to change. Exposure is the number of viewers and duration of their view (stationary or mobile). Table 3.8-1 provides a summary of the typical primary viewers in each landscape unit with the same numerical rating as described above.

In addition to the general landscape units described in Table 3.8-1, there are individual features that are visually important within the project area. Important visual features that are included in the Jackson County Comprehensive Plan (2004) are:

- Bear Creek Greenway Corridor;
- Roxy Ann Peak;
- Upper and Lower Table Rocks; and
- · Mount McLoughlin.

There are two historic resources in the project area. Both were determined eligible for listing on the NRHP. Changes in visual quality could have an effect on that determination if the historic resource is compromised by the changes in scenic quality.

- Camp White Station Hospital (VA SORCC), Landscape Unit 13.
- David Cingcade House and Barn Complex, Landscape Unit 14

A **viewshed** is the surface area visible from a given viewpoint or series of viewpoints. A viewshed or landscape mapping is a tool for identifying the views that a project could potentially affect.

For further information regarding National Register of Historic Places including citations to source documents, refer to the OR 62 Corridor Solutions Project Historic Resources Technical Report, May 2011. This report is available from the ODOT contact person identified on page i of this EIS.

**Figure 3.8-1** 

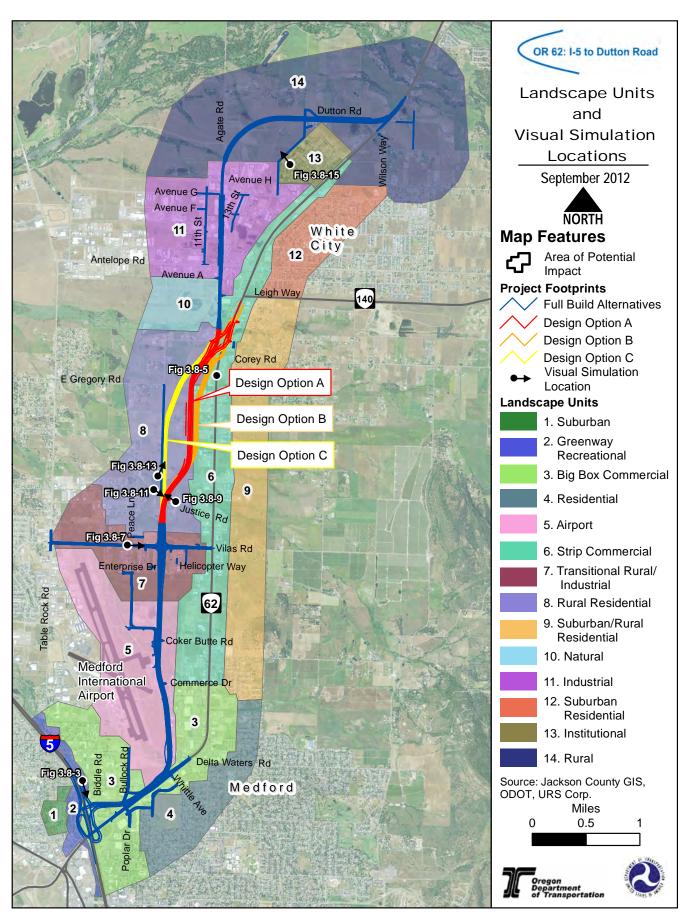


Figure 3.8-1 FEIS

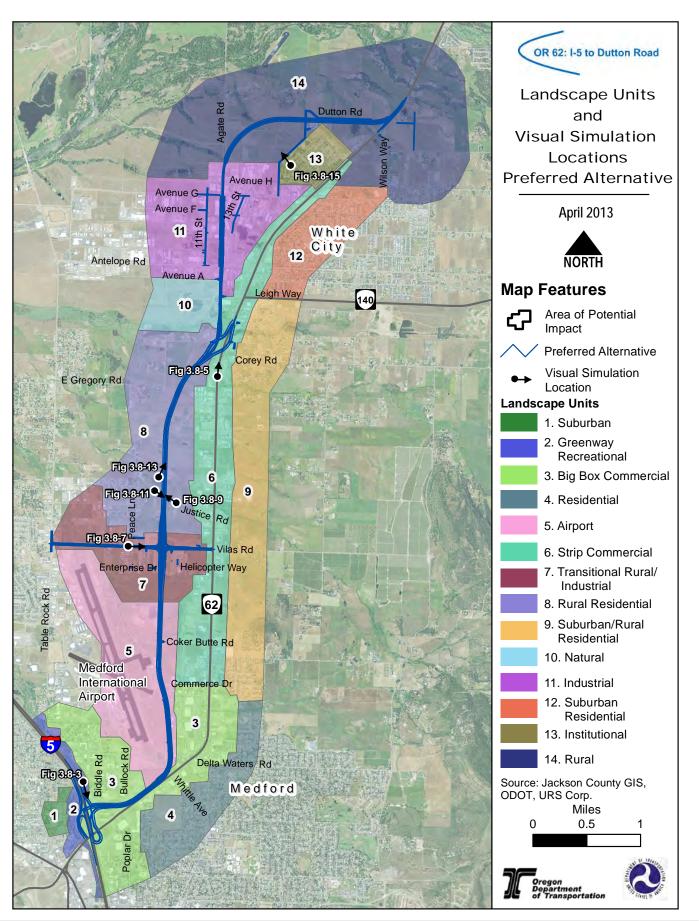


Table 3.8-1 Existing Visual Out	ality and Predominant Viewers of Landsca	pe Units (LU) within the API
innicate i misting insum Qui	and, and readminiant records or canada	P = 0 ::: 12 (20) 11 : 11::: 11:: 11:: 11:: 11:: 11:: 1

LU	Description	Vividness	Intactness	Unity	Visual Quality	Viewer Sensitivity
1	Suburban (Aspens at the Creek)	Average (4)	High (6)	High (6)	Moderately High (5)	Moderately High (5)
This landscape unit includes the Aspens at the Creek mobile home park and a small subdivision on the west side of the Bear Creek Greenway. The predominant viewers in this landscape unit are the residents of Aspens at the Creek and the small subdivision. Viewers are residential dwellers or pedestrians.						
2	Greenway Recreational (Bear Creek Greenway)	Moderately High (5)	Average (4)	Moderately High (5)	Moderately High (5)	High (6)
	andscape unit includes the Bear ds from Central Point to Ashland				s a paved recreational path along cle commuters.	g Bear Creek. This path
3	Big Box Commercial (OR 62 - South Terminus)	Very Low (1)	Low (2)	Low (2)	Low (2)	Low (2)
	andscape unit includes the comr				n terminus of the API. This include	es "strip" type commercial
4	Residential (Delta Waters Neighborhood)	Moderately Low (3)	Moderately Low (3)	Moderately Low (3)	Moderately Low (3)	Moderately High (5)
This landscape unit consists of the residential area to the south of OR 62 and east of I-5. Recent housing within this area includes multi-story multi-family housing on the northern end of Corona Avenue and an apartment complex off of Skypark Drive near Paloma Avenue. The predominant viewers are residents and their visitors.						
5	Airport (Medford Airport)	Moderately High (5)	Average (4)	Average (4)	Average (4)	Average (4)
					e airport that are located on Exce and the office workers on Excel Dr	
6	Strip Commercial (OR 62 Corridor)	Average (4)	Low (2)	Low (2)	Moderately Low (3)	Moderately Low (3)
	scape unit 6 is the area along the nercial development are the don				to Dutton Road in White City. The unit is the motorist.	highway and adjacent
7	Transitional Rural/ Industrial (Vilas Road Area)	Low (2)	Low (2)	Moderately Low (3)	Low (2)	Low (2)
					e predominant viewers within the not oriented to take advantage	
8	Rural Residential (Justice Road and Peace Lane Area)	Moderately High (5)	Average (4)	Moderately High (5)	Moderately High (5)	Moderately High (5)
The Justice Road and Peace Lane area is characterized by one- and two-story single-family houses in a rural setting. Older houses associated with small farms, their outbuildings, and barns still remain. Views are characterized by background vistas across the grassy valley floor to the mountains in the distance. The predominant viewers are the residents and their visitors.						
9	Suburban/Rural Residential (East of OR 62)	Average (4)	Average (4)	Average (4)	Average (4)	Average (4)
The area east of OR 62 is characterized by scattered rural housing, similar to Justice Road and Peace Lane landscape unit. The topography is different, however: land rises from OR 62 to the east, with small hills and buttes becoming foothills and then mountains further away. The predominant viewers within this landscape unit are motorists and area residents. Motorists would have an average degree of visual sensitivity, while residents would have a moderately high degree of sensitivity.						
10	Natural (Denman Wildlife Area)	High (6)	High (6)	High (6)	High (6)	Very High (7)
recrea	The Hall Tract of the Denman Wildlife Area is located north of Gregory Road and west of Agate Road. It is a 1,860-acre area managed by ODFW for recreational uses such as bird hunting, fishing, and wildlife viewing. It includes large ponds as well as an assortment of smaller vernal pools and wetlands. The vegetation consists of grasses, seasonal wildflowers, and shrubs. Viewers would be hunters, hikers, bicyclists, and birdwatchers.					

LU	Description	Vividness	Intactness	Unity	Visual Quality	Viewer Sensitivity
11	Industrial (White City Industrial Area)	Low (2)	Low (2)	Low (2)	Low (2)	Low (2)

The White City industrial area is a 390-acre industrial development on the west side of OR 62 in White City. It is characterized by large factories, mills, and processing plants for the wood products industry, and is crisscrossed by railroad spur lines. Buildings are large and feature prominent conveyors, exhaust stacks, and large hoppers. The predominant viewers within this unit are employees of the businesses. Although these stationary viewers experience the view for longer periods of time, their visual sensitivity is low because of the degraded visual environment and the fact that the businesses are not heavily dependent on a high-quality visual environment.

12	Suburban Residential (White City Residential Area)	Average (4)	Average (4)	Average (4)	Average (4)	Moderately High (5)
	Area)	3-(-)	J. (4)	J = ( +)		, <b>.</b>

The White City residential area is located on the east side of OR 62, opposite the White City industrial area. This area is an intact neighborhood of manufactured and site-built single-family houses, most of which are one story tall. Within White City, views are primarily limited to the nearby streetscape. The predominant viewers for this unit are residents and their visitors. Motorists in White City primarily have destinations in or around White City. As a result, most viewers would have a moderately high sensitivity to the visual environment.

13	Institutional (VA SORCC)	Moderately High (5)	High (6)	Moderately High (5)	Moderately High (5)	High (6)	
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The VA SORCC is an in- and outpatient facility for veterans. It includes residences and treatment facilities in multi-story buildings, as well as outdoor recreational space including a golf course, driving range, and outdoor amphitheater. The well-landscaped grounds include established trees and manicured shrubs surrounded by lush lawns and covers 63 acres. Viewers within this unit include veterans and staff. While all veterans have a moderately high degree of visual sensitivity, some have high sensitivity to their surroundings due to the traumatic nature of their injuries.

14	Rural (Dutton Road Area)	Moderately High (5)	Moderately High (5)	Average (4)	Moderately High (5)	High (6)
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The Dutton Road area is the rural area north of White City, located at the northeastern edge of the Roque River Valley. The flat terrain of the valley floor becomes more rolling in this area, turning into hills to the north. It includes the southeast corner of the Denman Wildlife Area's Military Slough Tract. Trees are also more common in this landscape unit than in the valley floor to the south; in places, the trees are so thick that they obstruct background views. Development is sparse; some older farmhouses, associated barns, and outbuildings exist but they are spaced far apart. A small, dense industrial complex is located at the end of Dutton Road. Viewers in the unit are the few residents, as well as the motorists passing through on OR 62 or Dutton Road. Residents would have a high degree of sensitivity, while motorists would be less sensitive.

## 3.8.3 Environmental Consequences

The project is not within the boundaries of a scenic corridor protection program (e.g. Scenic Byway designations, Wild and Scenic River Act, Columbia River Gorge National Scenic Area Act, National Forest Management Plans) and therefore does not have the potential to affect any of these types of resources.

#### 3.8.3.1 Direct Impacts

Impacts on the visual and aesthetic environment are changes to the existing conditions or visual characteristics that could be brought about by construction of a build alternative. Such changes may detract from the visual environment or enhance it. This assessment will focus on those changes that may be measured in terms of high, medium, or low impact. Based on changes in pattern elements and character as described in Section 3.8.1, a contrast rating for each of the landscape units was assessed using visual simulations and the FHWA visual assessment process. For each of these changes, the accompanying consideration is the sensitivity of the viewer to these changes as described in Table 3.8-1. The visual contrast is then rated based on vividness (whether the project changes the particularly striking or uninteresting features); intactness (whether the project would cause lots of obstructions to the view); and unity (whether the project would be in harmony with the buildings or clash with each other). The resulting visual quality is ranked on a score of 1 (very low) to 7 (very high) with 4 being average. The degree of change would coincide with the degree of impact.

#### No Build Alternative

Under the No Build Alternative, the project would not be built. As a result, there would be no direct impacts on visual resources stemming from the project itself.

#### **Build Alternatives and JTA Phase**

In order to facilitate the comparison of the build alternatives and JTA phase, the description of direct impacts is organized by landscape unit. Table 3.8-2 summarizes direct impacts on all landscape units except landscape unit 8: Rural Residential (Justice Road and Peace Lane Area). Table 3.8-2 summarizes direct impacts resulting from the SD Alternative, DI Alternative, and JTA phase. In landscape unit 8, the SD Alternative and DI Alternative are identical, but both include three design options: Option A, Option B, and Option C. The JTA phase also includes those three design options. As a result, Table 3.8-3 summarizes direct impacts on landscape unit 8 by design option rather than by alternative.

Descriptions of the visual appearance of each build alternative where landscape unit impacts were greater than "average" are described in more detail following the summary table. This description includes those simulations used to assess the contrast of implementation of the project. Landscapes units that would not be impacted or that are "average" or less (considered low impact) will not be discussed in further detail beyond the summary in tables 3.8-2 and 3.8-3. Landscape units 1, 9, 11, and 12 would have very low to average degrees of change and very low or low levels of impact for each build alternative and JTA phase due to the existing visual environment and the low level of contrast that would result from the build alternatives and JTA phase. Landscape unit 5 would have average degrees of change and average levels of impact for each build alternative and the JTA phase. Although landscape units 3 and 4 would have a moderately high visual change for the SD and DI Alternatives respectively, the overall impact would be average based on viewer sensitivity. Therefore, landscape units 1, 3, 4, 5, 9, 11, and 12 will not be discussed in any greater degree.

Table 3.8-2 Summary of Project Impacts by Landscape Unit, Build Alternative, and JTA Phase

Unit		SD Alte	SD Alternative		rnative	JTA Phase		
LU	Description	Degree of Change	Level of Impact	Degree of Change	Level of Impact	Degree of Change	Level of Impact	
1	Suburban (Aspens at the Creek)	Low (2)	Low (2)	Very Low (1)	Very Low (1)	Very Low (1)	Very Low (1)	
2	Greenway Recreational (Bear Creek Greenway)	Moderately High (5)	Moderately High (5)	Very Low (1)	Very Low (1)	Very Low (1)	Very Low (1)	
3	Big Box Commercial (OR 62 - South Terminus)	Moderately High (5)	Average (4)	Average (4)	Moderately Low (3)	Moderately Low (3)	Low (2)	
4	Residential (Delta Waters Neighborhood)	Low (2)	Low (2)	Moderately High (5)	Average (4)	Low (2)	Low (2)	
5	Airport (Medford Airport)	Average (4)	Average (4)					
6	Strip Commercial (OR 62 Corridor)	Moderately High (5)	Average (4)	Moderately High (5)	Average (4)	Low (2)	Low (2)	
7	Transitional Rural/Industrial (Vilas Road Area)	High (6)	Moderately High (5)	High (6)	Moderately High (5)	Moderately High (5)	Average (4)	
9	Suburban/Rural Residential (East of OR 62)	Very Low (1)	Very Low (1)					
10	Natural (Denman Wildlife Area)	Moderately High (5)	Moderately High (5)	Moderately High (5)	Moderately High (5)	Low (2)	Low (2)	
11	Industrial (White City Industrial Area)	Average (4)	Low (2)	Average (4)	Low (2)	Very Low (1)	Very Low (1)	
12	Suburban Residential (White City Residential Area)	Low (2)	Low (2)	Low (2)	Low (2)	Very Low (1)	Very Low (1)	
13	Institutional (VA SORCC)	Average (4)	Moderately High (5)	Average (4)	Moderately High (5)	Very Low (1)	Very Low (1)	
14	Rural (Dutton Road Area)	High (6)	High (6)	High (6)	High (6)	Very Low (1)	Very Low (1)	

Table 3.8-3 Summary of Project Impacts for Landscape Unit 8 by Design Option

		SD Alternative, DI Alternative, and JTA Phase								
		Option A		0pti	on B	Option C				
LU	Description	Degree of Change	Level of Impact	Degree of Change	Level of Impact	Degree of Change	Level of Impact			
8	Rural Residential (Justice Road and Peace Lane)	Moderately High (5)	Moderately High (5)	Average (4)	Average (4)	High (6)	High (6)			

#### Landscape Unit 2: Greenway Recreational (Bear Creek Greenway)

#### SD Alternative

Portions of the SD Alternative would be visible to viewers on the Bear Creek Greenway. The level of impact would vary according to the viewer's location. In specific locations there would be a moderately high degree of change. Because of the moderately high visual quality and the high degree of viewer sensitivity, the moderately high degree of change would result in a moderately high level of impact.

Viewers entering the Greenway from Railroad Park would have a clear view of the southbound I-5 off-ramp. The existing mechanically stabilized earth (MSE) wall would be removed and the existing ramp would be moved to the west, closer to the Greenway. The realigned ramp would be most visible from the Greenway bridge over Bear Creek (located along the path from Railroad Park to the Bear Creek Greenway), as this vantage point is higher than the Greenway path. This would represent a moderately high amount of visual change.

In the vicinity of the existing Medco Haul Road berm, a southbound ramp from the SD Alternative would intersect with the realigned I-5 off-ramp. The proposed intersection of ramps would be located in the vicinity of this berm and would be at a similar height as the berm. The addition of the proposed ramps would represent a high degree of visual change in this area, as the guardrail and traffic on the ramps would be visible from the Greenway path during all times of the year.

The SD Alternative would move the existing bicycle/pedestrian bridge slightly to the east to accommodate the widened I-5 bridges. The path would be adjusted to provide the same connectivity. The area would look slightly different but the primary impacts would come from widening of I-5. The Greenway Bridge is at approximately the same height as I-5, so viewers on the bridge have a clear view of traffic on I-5. Figure 3.8-2 shows the existing conditions from the bridge. Figure 3.8-3 shows a simulation of the SD Alternative. The location of this visual simulation is mapped in Figure 3.8-1.

#### DI Alternative

Structures and roads associated with the DI Alternative would not be visible to viewers on the Bear Creek Greenway, so there would be very low impacts in this landscape unit as indicated in Table 3.8-2.

#### JTA Phase

Structures and roads associated with the JTA phase would not be visible to viewers on the Bear Creek Greenway, so there would be very low impacts in this landscape unit as indicated in Table 3.8-2.

Figure 3.8-2 View Facing South on Bear Creek Greenway Path, Facing The Bridges Over Bear Creek (North of The North Medford Interchange; Existing)



Figure 3.8-3 Visual Simulation of the SD Alternative from the Same View as Figure 3.8-2



#### **Landscape Unit 6: Strip Commercial (OR 62 Corridor)**

#### **Build Alternatives**

From landscape unit 6 north, the two build alternatives are identical. The overall degree of change would be moderately high, but because the visual quality and viewer sensitivity are both moderately low, the level of impact would be average, as indicated in Table 3.8-2. The primary visual change within landscape unit 6 would result from the proposed directional interchange between the proposed bypass and OR 62 near Corey Road, south of White City. Figure 3.8-4 shows the current view looking north on OR 62, near this proposed interchange. Figure 3.8-5 is a visual simulation of that same view showing the proposed interchange associated with Design Option C of both build alternatives. The location of this visual simulation is mapped in Figure 3.8-1.

Most prominent from the viewpoint in Figure 3.8-5 is the northbound off-ramp for traffic exiting the bypass and continuing north on the existing highway through White City. An elevated on-ramp for southbound traffic leaving the existing OR 62 and entering the proposed bypass would cross over the top of the bypass roadway and is visible in the distance in Figure 3.8-5. The corresponding ramp associated with Design Option B of both build alternatives would be located 70 feet south of the location shown in Figure 3.8-5, while the on-ramp associated with Design Option A would be located 10 feet south of the location shown in Figure 3.8-5. In general, the visual impacts associated with the three design options would be similar because the designs of the proposed interchanges are similar. Visual impacts on specific properties would vary according to the proximity to the proposed interchange.

#### JTA Phase

The JTA phase would include an at-grade intersection between the bypass and OR 62 in the vicinity of Agate Road. This intersection would be the northern terminus of the JTA phase. It would include a new traffic signal, some median barriers, and some minor changes to local streets in the vicinity. The new intersection would represent a low visual change to most viewers in landscape unit 6, with a correspondingly low level of impact as indicated in Table 3.8-2.

Figure 3.8-4 View North on OR 62 Near Agate Road (Existing)



Figure 3.8-5 Visual Simulation of the Proposed Interchange from Same Viewpoint as Figure 3.8-4



#### Landscape Unit 7: Transitional Rural/Industrial (Vilas Road Area)

#### **Build Alternatives**

Both build alternatives would include an interchange at Vilas Road where the Medco Haul Road currently intersects with Vilas Road. Overall degree of change in this area would be high, but because of the low visual quality and viewer sensitivity, the level of impacts would be reduced from high to moderately high as shown in Table 3.8-2. The bypass roadway would be elevated above Vilas Road using an MSE wall and would include an overpass spanning Vilas Road. The overpass and associated interchange would be visible primarily to motorists on Vilas Road and to businesses immediately adjacent to the build alternatives. Because Vilas Road is straight and relatively flat between OR 62 and Table Rock Road, the overpass would be visible for most of that distance. For motorists close to the bypass, the overpass and associated interchange would obstruct views of the mountains.

Figure 3.8-6 shows existing conditions of the view facing east on Vilas Road and Figure 3.8-7 shows the photo simulation of how this same view would be changed by the build alternatives. The location of this visual simulation is mapped in Figure 3.8-1.

Both build alternatives would widen Vilas Road to five lanes (two in each direction, plus a center turn lane) with bicycle lanes and sidewalks. This widening would occur on Vilas Road between OR 62 and Table Rock Road. Businesses and residences located along this segment of Vilas Road, as well as travelers on Vilas Road, would experience a high degree of visual change because existing landscaping and fencing would be removed and replaced with pavement. While this change would have a relatively low impact on business-related viewers, it would have a moderately high degree of impact on residential viewers, as indicated in Table 3.8-2.

In addition to widening Vilas Road, both build alternatives would change other local streets in landscape unit 7. The new local streets would be two-lane streets and would include sidewalks and bicycle lanes. Changes to the local street network would change the circulation patterns and represent a minor visual change, but it would not substantially alter the overall character of the area, particularly since the new roads would be designed to the same standards as the existing roads.

#### JTA Phase

With the JTA phase, the bypass would cross over Vilas Road but there would be no interchange. The overcrossing itself would look similar to what is shown in Figure 3.8-7, but there would be no interchange ramps and Vilas Road would remain a 3-lane road.

As a result, this landscape unit would only experience visual impacts resulting from the elevated bypass and would be similar to those described above. The change would be moderately high, and the level of impact would be average as Table 3.8-2 indicates.

Figure 3.8-6 View Looking East on Vilas Road (Existing)



Figure 3.8-7 Visual Simulation of Both Build Alternatives from Same View As Figure 3.8-6



#### Landscape Unit 8: Rural Residential (Justice Road and Peace Lane Area)

In landscape unit 8, there are three potential alignments for each build alternative: Design Options A, B, and C. Design Option C is the recommended design option and will be described first, followed by Design Options A and B.

#### Design Option C

Figures 3.8-8 and 3.8-9 provide an existing view and a visual simulation of the view from Justice Road facing west toward the proposed bypass associated with Design Option C. As shown in the simulation, Justice Road would end in a cul-de-sac and the proposed bypass associated with Design Option C would be built just slightly above the current grade level. The bypass alignment of Design Option B would cross Justice Road approximately 120 feet east (closer to the viewer in Figure 3.8-8), while the bypass alignment of Design Option A would cross approximately 140 feet east of the view in Figure 3.8-8. The location of this visual simulation is mapped in Figure 3.8-1.

Views toward the new roads associated with Design Option C, particularly in the vicinity of Justice Road, would be changed. In this landscape unit, many houses would have a clear view of the bypass itself because the bypass would be relatively close to many houses. South of Justice Road, the Vilas Road interchange would be visible because the interchange would be elevated. While this exact view is not shown in Figure 3.8-9, the height of the new structure can be seen in Figure 3.8-7. Even though the proposed bypass would not be elevated in the vicinity of Justice Road, it would be visible from many residences and would be a prominent new feature in the landscape. For people in and around the houses on Justice Road, the bypass and associated new roads would represent a high degree of change. Because of the moderately high visual quality and viewer sensitivity, this would be a high level of impact as indicated in Table 3.8-3.

The Preferred Alternative will also include gated access for emergency vehicles to enter and exit the bypass via Justice Road. The grass-covered embankment between Justice Road and the bypass, shown in Figure 3.8-9, will instead be a gravel or asphalt surface. The gates, which will open only on demand, will be of similar style and material as the metal fencing that will be used along the length of the bypass. There would still be a high level of visual impact in this area.

Figure 3.8-8 View Facing West on Justice Road (Existing)



Figure 3.8-9 Visual Simulation of Option C from Same Viewpoint as Figure 3.8-8



Figures 3.8-10 and 3.8-11 show the existing view facing east along Justice Road, along with a visual simulation of roads associated with Design Option C. The location of this visual simulation is mapped in Figure 3.8-1. The bypass associated with Design Options A and B would be 140 and 120 feet further from the viewer in Figure 3.8-10, respectively. The existing dirt access road in the left-side foreground of Figure 3.8-10 would be converted to a paved local street connecting Justice Road to Gregory Road using a portion of the Medco Haul Road. That portion of the Medco Haul Road is currently an unpaved road leading to several houses. The new local street would be the same for Design Options A, B, and C.

The Preferred Alternative will not include the new paved local street along the existing Medco Haul Road, as shown in Figure 3.8-11, in order to reduce project costs. Under the Preferred Alternative, this unpaved portion of the Medco Haul Road will not be changed. The bypass will be located as shown in Figure 3.8-11. The Preferred Alternative will also include gated access for emergency vehicles to enter and exit the bypass via Justice Road. The grass-covered embankment between Justice Road and the bypass, shown in Figure 3.8-11, will instead be a gravel or asphalt surface. The gates, which will open only on demand, will be of similar style and material as the metal fencing that will be used along the length of the bypass.

Figure 3.8-10 View Facing East on Justice Road; Roxy Ann Peak is in the Center of the Photo (Existing)



Figure 3.8-11 Visual Simulation of Design Option C from the Same Viewpoint as Figure 3.8-10



Figures 3.8-12 and 3.8-13 show the existing view facing northeast from one of the residential yards on the Medco Haul Road just north of its intersection with Justice Road, along with a simulated view of the new roads associated with Design Option C. The location of this visual simulation is mapped in Figure 3.8-1. The street in the foreground of Figure 3.8-13 is the proposed local access road connecting Justice Road to Gregory Road. The semi truck in Figure 3.8-13 is on the proposed bypass. As shown in Figure 3.8-13, the bypass and the new local road would be a prominent visual feature in the rural residential area of landscape unit 8. Residents closest to the alignment, and particularly those currently with high-quality views toward the proposed alignment, would experience a high degree of change. This would represent a high level of impact as Table 3.8-3 indicates.

The Preferred Alternative will not include the new paved local street along the existing Medco Haul Road, as shown in Figure 3.8-13, in order to reduce project costs. Under the Preferred Alternative, this unpaved portion of the Medco Haul Road will not be changed. The bypass will be located as shown in Figure 3.8-13. Not constructing the new local road will reduce the visual change experienced by residents along the Medco Haul Road north of Justice Road. However, the bypass will still represent a prominent visual feature in the landscape for these residents.

Figure 3.8-12 View Facing Northeast from the Medco Haul Road (North of Justice Road; Existing)



Figure 3.8-13 Visual Simulation of Design Option C from the Same Viewpoint as Figure 3.8-12



#### Design Option A

The bypass alignment of Design Option A would cross Justice Road approximately 140 feet east of the bypass alignment of Design Option C, so impacts on specific residences on Justice Road would vary according to the bypass' proximity to the viewer. In general, however, impacts on views along Justice Road would be similar to those resulting from the bypass and roads associated with Design Option C: there would be a high degree of change and a high level of impact.

Direct impacts resulting from the roads associated with Design Option A would differ from direct impacts resulting from the roads associated with Design Option C for the residents on the Medco Haul Road. Although the local road would be built as part of Design Option A, the bypass would be located approximately 1,200 feet to the east (away from the residences), and would represent a moderately high degree of visual change and moderately high level of impact to those residences on the Medco Haul Road.

#### Design Option B

The bypass alignment of Design Option B would cross Justice Road approximately 120 feet east of the bypass alignment of Design Option C. General impacts on Justice Road residences resulting from roads associated with Design Option B would be similar to those resulting from roads associated with Design Options A and C, but impacts on specific residences would vary according to their proximity to the project.

Further north, the bypass alignment of Design Option B would be located approximately 1,500 feet east of the bypass alignment of Design Option C. It would have the least impacts on residences on the Medco Haul Road out of the three design options because it would be farthest away. It would be located directly behind a row of businesses located along the west side of OR 62 and would displace some commercial buildings. Because the businesses are oriented toward OR 62, away from the location of the proposed bypass, the visual impact would be low to average and the corresponding level of impact would be average as indicated in Table 3.8-3.

#### Landscape Unit 10: Natural (Denman Wildlife Area)

#### **Build Alternatives**

The build alternatives' bypass would be highly visible to viewers in the Denman Wildlife Area's Hall Tract. However the number of viewers would be low. Therefore a simulation was not included for this location. Agate Road is currently visible from a variety of vantage points in the Denman Wildlife Area's Hall Tract, but the bypass roadway associated with the build alternatives would be much wider than Agate Road is now, and the addition of the bypass would cause a moderately high degree of visual change and a similar level of impact for viewers facing west. However, because there are no formal trails in the areas of the Denman Wildlife Area's Hall Tract near the bypass and the parking area on Agate Road would be relocated further away from the bypass, there would be few potential viewers close to the bypass.

To the north of the Denman Wildlife Area's Hall Tract, the bypass roadway would be elevated and would cross over the top of Avenue G. As a result, the bypass roadway would become a new feature in the view to the north; because this view already includes a variety of industrial buildings, the visual change would be average, and the level of impact would also be average. The proposed interchange near Corey Road to the southeast of Denman Wildlife Area's Hall Tract would be visible from some vantage points within the wildlife area, but due to the topography and existing vegetation, the interchange would not be highly visible. The overall change would be moderately high with a moderately high visual impact, as shown in Table 3.8-2.

#### JTA Phase

The bypass associated with the JTA phase would terminate at an at-grade intersection with OR 62 just south of the existing OR 62 and Agate Road intersection, which is south of the Denman Wildlife Area's Hall Tract. It would only be visible from the southeast corner of the Denman Wildlife Area's Hall Tract, but even for viewers in that area, the visual change would be low, as would the level of impact as Table 3.8-2 indicates.

#### Landscape Unit 13: Institutional (VA SORCC)

#### **Build Alternatives**

Viewers in the VA SORCC with a view of the project are most likely to be located on the golf course, on the northernmost portions of Avenues N and L, or in buildings with views to the northeast or northwest. At the point where it comes closest to the VA SORCC, the bypass roadway would be at ground level and would be located where Dutton Road currently exists. For viewers on the golf course, the bypass would be, at closest, one-third mile away. Figure 3.8-14 shows the existing view from the golf course facing north toward the Table Rocks. From most vantage points on the golf course the bypass would be barely visible in the distance. Figure 3.8-15 is a visual simulation of how the project would look to a viewer on the golf course. The two cars in the middle ground are on the new access road that would be built along the edge of the VA SORCC property. The bypass associated with both build alternatives is barely visible. For viewers on the perimeter roads (primarily Avenues N and L), existing buildings on Dutton Road would block some views of the bypass where it would come closest to the VA SORCC, and existing trees along the VA SORCC roadways would also screen the bypass from view somewhat. Viewers in buildings with views to the northeast or northwest, and particularly those viewers above the ground floor, would have fairly clear views of the bypass, although it would be visible in the middle ground rather than foreground. Although the bypass would be most visible from the northern corner of the VA SORCC, few viewers exist in that portion of the property, as it is undeveloped and unused land.

In addition to the bypass roadway, the build alternatives would include a new local street to replace Dutton Road, which would be displaced by the bypass. Dutton Road would be shifted north to be located along the northern edge of the bypass roadway. Dutton Road currently ends in a cul-de-sac 0.7 miles west of OR 62. In the vicinity of where Dutton Road currently ends, it would instead turn south and cross over the top of the proposed bypass roadway. After crossing the bypass roadway, Dutton Road would return to grade and run along the western edge of the VA SORCC property before intersecting with Avenue G. Because the proposed road would be a surface street with very low traffic volumes, it is unlikely to have much of a visual impact on the VA SORCC.

Overall, the degree of visual change to viewers at the VA SORCC would be moderately low to average, depending on the viewers' specific location. However, because many viewers have a high sensitivity, the visual change would be average and the impact would be moderately high, as Table 3.8-2 indicates.

#### JTA Phase

The JTA phase footprint would not extend into this landscape unit so there would be very low visual impacts as indicated in Table 3.8-2.

Figure 3.8-14 View Facing North from the VA SORCC Golf Course (Existing)



Figure 3.8-15 Visual Simulation of Build Alternatives from the Same Viewpoint as Figure 3.8-14



#### Landscape Unit 14: Rural (Dutton Road Area)

#### **Build Alternatives**

Viewers in the Dutton Road area would experience a high degree of visual change caused by the construction of the build alternatives, which would result in a high level of impact as Table 3.8-2 indicates<sup>1</sup>.

The bypass associated with both build alternatives would be elevated near Agate Road and would return to grade as it curves eastward towards the Dutton Road interchange. Existing views are primarily rural, with a few industrial and commercial structures visible. Views from the Denman Wildlife Area's Military Slough Tract (located north of Avenue G and west of Agate Road) towards the project area would be changed to include the proposed bypass associated with both the SD and DI Alternatives. Due to the expansive nature of the current views and the serene rural character of the area, the visual change resulting from the proposed bypass would be high.

The interchange at Dutton Road would be located at the existing intersection of OR 62 and Dutton Road. Because the highway already exists in the area, the degree of change resulting from the new interchange would not be as great as the degree of change that would result from the construction of the bypass. Nevertheless, the elevated interchange ramps would be visible to residents who do not currently have a view of the highway, particularly those located on the east side of OR 62 north of East Dutton Road. The new interchange would represent a high degree of visual change and a high level of impact as indicated in Table 3.8-2.

The JTA phase footprint would not extend into this landscape unit so there would be a very low visual impact as Table 3.8-2 indicates.

#### 3.8.3.2 Construction Impacts

#### **No Build Alternative**

There would be no construction associated with the No Build Alternative and therefore no construction impacts on visual resources.

#### **Build Alternative**

For all build alternatives, construction impacts would result in a moderately high to high degree of visual change for all areas with a view of construction areas or streets that construction vehicles would use. These visual changes would be temporary (a relatively short duration) and as a result the level of constructionrelated visual impacts would be moderately low to average. Impacts would include construction equipment, disturbed/relocated earth, materials storage, and highvisibility safety barriers.

#### JTA Phase

Construction impacts close to the construction area for the JTA phase would result in short-term temporary visual changes. These changes would be an average to moderately high degree of visual change, but would represent a moderately low level of impact.

<sup>&</sup>lt;sup>1</sup> No simulation is available for this area due to limited public access.

#### 3.8.3.3 Indirect Impacts

Indirect impacts are those that are indirectly caused by the build alternatives. They include changes in traffic patterns, light or glare emanating from cars and trucks, and changes in development patterns as a result of the construction of the build alternatives.

#### **No Build Alternative**

With the No Build Alternative, the proposed project would not be constructed. Traffic congestion on OR 62 would gradually become worse. Anyone with a view of the highway would see more cars and trucks moving at slower speeds than today. Mobile viewers in landscape units 3: Big Box Commercial (OR 62 – South Terminus) and 6: Strip Commercial (OR 62 Corridor) are primarily motorists, and they would experience the corridor at much slower speeds with more car and trucks in the foreground. Because this increase in congestion would occur gradually, the degree of visual change would be low and the level of impacts on viewers would also be low.

#### **Build Alternatives and JTA Phase**

The build alternatives and the JTA phase would reduce traffic volumes on the bypassed portion of existing OR 62. Viewers in sight of existing OR 62 would see fewer vehicles on the roadway. By 2035, traffic volumes on the bypassed portion of existing OR 62 would increase and be similar to current levels, so this visual change would be low.

The build alternatives and the JTA phase would all include access changes in various locations. In some cases, business driveways would be consolidated, while in other cases, new streets would be built to provide access to a property via a different route. People using these new routes would experience different views than on the existing routes. Development patterns are likely to change as a result of access changes. Businesses would be likely to reorient their front entrances and advertising signs to the new streets, causing a change in the view.

Automobile headlights would also be an indirect impact resulting from the build alternatives and the JTA phase. Where new roads are proposed, people near those roads would experience new light patterns from passing vehicles. Those changes would be greatest near roadway curves, because the headlights would sweep across the area outside the curve as the automobile travels along the road. Any buildings located on the outside of a proposed new curve would have headlights sweeping across the building.

New street lighting would change light patterns in the project area as well. Street lighting has not been designed yet, so the extent and location of the change is not certain.

## 3.8.4 Avoidance, Minimization, and/or Mitigation Measures

The following describes potential mitigation strategies for addressing adverse visual impacts. Visual mitigation commitments would be determined, designed, and implemented with the concurrence of ODOT and FHWA.

A potential mitigation approach could involve establishment of a project aesthetic committee to obtain local input and recommendations on the variety of form, color, and texture treatments for proposed features, as well as, vegetation treatments associated with the proposed project. This committee could develop a more detailed and specific set of aesthetics recommendations to ensure that proposed features harmonize with their surroundings and do not detract from the visual quality of the area.

Goals for mitigation of the visual impacts created by the proposed project include the following:

- Minimize or buffer the loss of visual resources;
- Replace or reduce the loss of elements that buffer resident viewers from negative views of the build alternatives or JTA phase and its associated structures and access roads:
- Prevent or reduce obstructions to high-quality views or important features affected by the build alternatives or JTA phase; and
- Improve the appearance of features associated with the project.

#### **Bridges, Overcrossings, and Other Structures**

- Design overcrossing structures so their scale does not overwhelm the surrounding context.
- Use the extensive palette of rich colors, including shades of gold, light and deep greens, deep blues and the metallic hues of the mill area of the White City Industrial Area, that are naturally or presently found around the floor, hills, buttes and mountains of the Rogue River watershed and Bear Creek sub-watershed.
- Select guardrails, light posts, signs, and other items that would cause the least amount of visual intrusion; consider materials and colors that complement or harmonize with the immediate or background setting.

#### Lighting

- Design roadway lighting so that it does not negatively impact nearby residents or patients at the VA SORCC.
- Select and direct lights so that the roadway and sidewalks are adequately
  illuminated while shielding residences from the light (especially those with sleeping
  areas facing the road).
- Select and aim lights to minimize the intrusion of light into the night sky.
- Construct screens to minimize the glare from headlights in areas where new roads would direct headlights in new directions.

#### **Landscaping and Vegetation**

- Preserve as much existing vegetation as possible to screen views of the project.
- Maximize the use of plants and trees to screen the project and enhance the visual environment with patterns that are consistent with the clustered nodes of existing plants and trees.
- Use plants and trees that are native to the immediate area, where possible.

# 3.8.5 Avoidance, Minimization, and/or Mitigation Commitments Incorporated into the Preferred Alternative

ODOT makes the following commitments.

#### **JTA Phase**

There are no mitigation commitments exclusive to the JTA phase.

## JTA Phase and Preferred Alternative Subsequent to Construction of the JTA Phase

- ODOT will establish a project aesthetic committee to obtain local input and recommendations on the variety of form, color, and texture treatments for proposed features, as well as vegetation treatments associated with the proposed project.
- ODOT will incorporate context sensitive solutions in its designs and consider
  materials and colors that complement or harmonize with the immediate or
  background setting. This could include using the extensive palette of rich colors
  that are currently found around the floor, hills, buttes and mountains of the Rogue
  Valley. ODOT will select guardrails, light posts, signs, and other items that will cause
  the least amount of visual intrusion.
- ODOT will design overcrossing structures so their scale will not overwhelm the surrounding context.

- ODOT will design roadway lighting so that it does not negatively impact nearby residents or patients at the VA SORCC, by selecting and directing lights so that the roadway and sidewalks are adequately illuminated while shielding residences from the light. ODOT will also select and aim lights to minimize the intrusion of light into the night sky.
- ODOT will preserve as much existing vegetation as possible and maximize the use
  of new plants and trees to screen the project and enhance the visual environment
  with patterns that are consistent with the surrounding vegetation. ODOT will use
  plants and trees that are native to the immediate area wherever practical.
- ODOT will utilize native flora for landscaping to help retain the character of the place.

## Preferred Alternative Subsequent to Construction of the JTA Phase

There are no mitigation commitments exclusive to the Preferred Alternative.

#### HYDROLOGY

#### **Section 3.9 Content**

3.9.1 **Regulatory Setting** 3.9.2 **Affected Environment** 3.9.2.1 Hydrology 3.9.2.2 Floodplains 3.9.2.3 Groundwater 3.9.3 **Environmental Consequences** 3.9.3.1 Direct Impacts 3.9.3.2 Indirect Impacts 3.9.3.3 Construction Impacts 3.9.4 Avoidance, Minimization, and/or Mitigation Measures 3.9.5 Avoidance, Minimization, and/or Mitigation Commitments Incorporated Into the Preferred Alternative

## 3.9 Hydrology, Floodplains, and **Floodways**

New roadways can increase flooding by increasing storm water runoff and placing roadway structures and fill in floodplains and floodways. Section 3.10 addresses increased storm water runoff. This section addresses potential impacts from new roadway structures and fill in floodplains. None of the alternatives would place structures or net fill in *floodways*, so this section does not address floodway impacts.

## 3.9.1 Regulatory Setting

Executive Order 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. The Federal Emergency Management Agency (FEMA) is the primary jurisdictional agency regulating potential impacts on floodplains and floodways.

Proposed federal actions must consider:

- The practicability of alternatives to any longitudinal encroachments
- Risks the proposed action poses to floodplains and floodways
- Impacts on natural and beneficial floodplain values
- Support of incompatible floodplain development
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values impacted by the proposed action

The base floodplain is defined as "the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year," which is also referred to as the 100-year flood. An encroachment is defined as "an action within the limits of the base floodplain." Floodplains provide storage for floodwater and slow floodwater down, allowing sediments to settle, pollutants to filtrate out, and nutrients to be absorbed by floodplain vegetation. Fill in the floodplain can raise flood elevations to levels that could place life and property at risk.

The City of Medford requires a floodplain permit prior to construction within the base floodplain as designated by FEMA. Similarly, Jackson County requires floodplain review and approval before construction within floodplains and regulates development within riparian areas. The County requires that structures and grading be kept at least 50 feet away from streams that provide habitat, such as Bear Creek.

A longitudinal encroachment runs along a floodplain, instead of crossing the floodplain.

#### 3.9.2 Affected Environment

#### 3.9.2.1 Hydrology

The API, defined for this analysis, is the project right-of-way and contains 11 streams that would be crossed by the project. These streams are listed below from south to north. All API streams eventually drain west to the Rogue River (see Figure 3.9-1):

- Bear Creek, a tributary to the Rogue River
- · Lone Pine Creek, a tributary to Bear Creek
- Upton Creek, a tributary to the Rogue River
- North and South branches of Swanson Creek, a tributary to Whetstone Creek
- · Whetstone Creek, a tributary to the Rogue River
- North and South branches of Jack Creek, another tributary to Whetstone Creek
- Three unnamed Little Butte Creek tributaries (labeled on Figure 3.9-1 as North Tributary to Little Butte Creek, South Tributary to Little Butte Creek, and Unnamed Tributary).

With the exception of the two branches of Jack Creek, all of these streams are classified as medium streams, meaning the average annual flows are between 2 cubic feet per second (cfs) and 10 cfs. Jack Creek is classified as a small stream, meaning that annual average flows are less than 2 cfs. Bear Creek is "flashy," meaning its flows peak quickly after rainfall, mostly because clay-rich soils and urbanization in its drainage area accelerate storm water runoff. Whetstone and Upton Creeks are heavily affected by irrigation diversions.

3.9.2.2 Floodplains

Figure 3.9-1 shows the base floodplains along all streams in the API. Swanson Creek generally has the widest floodplain of any of the API streams within the vicinity of the project. Flooding has been a persistent problem where the build alternatives and JTA phase would cross South Swanson Creek. This flooding is mainly due to insufficient stream facilities downstream of the crossing at Gregory Road (i.e., overgrown vegetation and privately installed culverts).

3.9.2.3 Groundwater

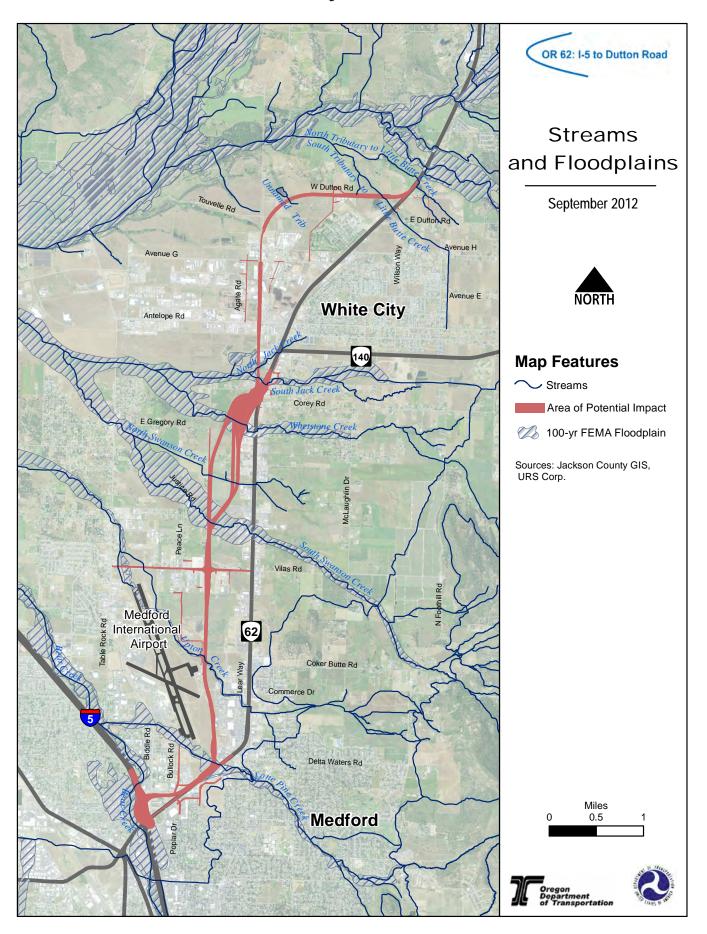
No "sole source aquifers" or "wellhead protection areas" are located within the API. Jackson County contains only two drinking water protection areas certified by the Oregon Department of Health Services. One is the City of Medford's recharge area for its Big Butte Springs source. The other is the protection area for Fern Valley Estates Improvement District wells. Both protection areas are located to the south of the API and would not be impacted. There are individual domestic drinking water wells in the API. Impacts to these wells are unlikely due to the general limited infiltration capacity of the soils within the API, and that there are no deep infiltration facilities, such as drywells, that would facilitate infiltration of stormwater deep enough to affect deep groundwater. Therefore there is no further discussion of domestic drinking water wells.

For further information regarding hydrology, floodplains, and floodways, including citations to source documents, refer to the OR 62 Corridor Solutions Project Water Resources Technical Report, May 2011. This report is available from the ODOT contact person identified on page i of this EIS.

A sole source aquifer is an underground water supply designated by the U.S. Environmental Protection Agency (EPA) as the "sole or principal" source of drinking water for an area.

A wellhead protection area is a protected surface and subsurface zone surrounding a well or well field supplying a public water system to keep contaminants from reaching the well water

Figure 3.9-1



## 3.9.3 Environmental Consequences

#### 3.9.3.1 Direct Impacts

#### **No Build Alternative**

There would be no new or replacement stream crossings under the No Build Alternative and therefore no impacts on flood elevations.

#### **Build Alternatives**

Based on available design information, neither the build alternatives nor the JTA phase would include any longitudinal encroachments on floodplains or impair the natural, beneficial functions of the floodplains.

All of the build alternatives and associated design options involve both new and replacement stream crossings. All new and replacement stream crossings, except for Bear Creek, would be culverts, and no crossings would span the entire 100-year floodplain. Design of new and replacement stream crossings would involve no net fill or minimal net fill to avoid significant impacts to the 100-year floodplain of streams within the API and increasing flood levels of those streams.

Net fill means that there would be an increase in the volume of fill (such as soil, rocks, or structures) located within the 100-year floodplain compared to existing conditions

The remainder of this subsection compares the potential impacts of the alternatives. With the exception of Bear Creek, the number and location of stream crossings are identical for both build alternatives. Potential impacts on Bear Creek are described first, followed by potential impacts resulting from other stream crossings.

#### **Alternative-Specific Impacts**

The SD Alternative would construct two new roadway crossings and would replace one existing crossing over Bear Creek. The replacement crossing of Bear Creek would be the relocation of the existing Bear Creek Greenway bridge. This crossing would not span the 100-year floodplain, but would be designed with no net fill within the 100-year floodplain of Bear Creek. The bridge pier locations would be placed outside of the ordinary high water line (OHWL). Because net fill would be avoided, impacts to the Bear Creek 100-year floodplain and flooding levels would be negligible. The DI Alternative would not cross Bear Creek and therefore not affect the Bear Creek 100-year floodplain.

Figure 3.9-2 shows the streams crossed by the build alternatives where the alternatives would differ in the vicinity of the southern terminus.

#### **Impacts Common to Both Build Alternatives**

Other than Bear Creek, the potential impacts of the build alternatives on flooding are the same, but the design options differ from one another.

Table 3.9-1 summarizes the number of new and replacement stream crossings. The crossings would result from the bypass, itself; the realignment of the access roads; and the Justice/Gregory connector road. Figure 3.9-3 and Figure 3.9-4 show the stream crossings where the SD and DI alternatives would be the same.

Four changes to the design of the Preferred Alternative have resulted in a reduction in the number of new and replacement stream crossings. The updated number of new and replacement stream crossings are included in Table 3.9-1. Figures 3.9-2 FEIS and 3.9-3 FEIS show the locations of new and replacement stream crossings for the Preferred Alternative. The following describes how changes to the design of the Preferred Alternative have changed the number of stream crossings.

The bypass will cross over Commerce Drive. Commerce Drive will continue to serve as the main approach road to the USCIS building and other commercial facilities located on the eastern edge of the Medford Airport. As a result, the extension of roadway access to the USCIS building and other buildings from Vilas Road via Airway Drive will no longer be necessary and these roadways are no longer part of the project. Because these roadways are no longer included, one new stream crossing at Upton Creek has been removed.

The Justice/Gregory connector road has been eliminated from the project to reduce project cost and will not be built. As a result of this change, one replacement stream crossing at South Swanson Creek and one new stream crossing at North Swanson Creek have been removed from the project.

Table 3.9-1 Number of Stream Crossings by Build Alternative and Design Option

	SD Alternative						DI Alternative					
	Design Option A		Design Option B		Design Option C (Preferred Alternative)		Design Option A		Design Option B		Design Option C	
Creek	New	Replace	New	Replace	New	Replace	New	Replace	New	Replace	New	Replace
Bear	2	1	2	1	2	1	-	-	-	-	-	-
Lone Pine	1	1	1	1	1	1	1	1	1	1	1	1
Upton	1	1	1	1	1 0 <sup>1</sup>	1	1	1	1	1	1	1
South Swanson	1	1	1	1	1	1 0 <sup>2</sup>	1	1	1	1	1	1
North Swanson	2	0	2	0	2 1 <sup>3</sup>	0	2	0	2	0	2	0
Whetstone	1	0	1	0	1 0 <sup>4</sup>	1	1	0	1	0	1	1
South Jack	1	2	1	2	1 0 <sup>5</sup>	2	1	2	1	2	1	2
North Jack	0	1	0	1	0	1	0	1	0	1	0	1
Tributary to Cable Reservoir	1	0	1	0	1	0	1	0	1	0	1	0
South tributary to Little Butte Creek	1	1	1	1	1	1	1	1	1	1	1	1
North tributary to Little Butte Creek	3	1	3	1	3	1	3	1	3	1	3	1
Total Crossings	14	9	14	9	14 10	10 9	12	8	12	8	12	9

#### Source: Water Resources Technical Report

The Preferred Alternative alignment has shifted slightly to the west where it will cross Whetstone Creek. As a result of this change, the new stream crossing at Whetstone Creek previously identified in the DEIS has been removed from the project.

The design for the Preferred Alternative has been refined in the vicinity of the Agate Road interchange. The design for the Preferred Alternative no longer includes the new local roadway that would have extended Crater Lake Avenue to connect with Gramercy Drive and would have included a new crossing of South Jack Creek. As a result, the new stream crossing at South Jack Creek previously identified in the DEIS has been removed from the project.

Both alternatives would involve the construction of one new and one replacement crossing of Lone Pine and Upton Creeks. Each of these crossings would be fish-passable dual reinforced concrete box culverts and would result in net fill in the 100-year floodplain. Replacement culverts would have larger spans than existing culverts and would allow more water to flow through the waterway crossing during storm events, lowering the flood levels upstream of the crossings. The 100-year flood levels downstream of the crossings for both Lone Pine Creek and Upton Creek would not increase as a result of the project.

As a result of the design refinements discussed above, one new stream crossing at Upton Creek will no longer be included in the Preferred Alternative.

<sup>&</sup>lt;sup>1</sup>One new stream crossing removed due to removal of airport access roadways from project.

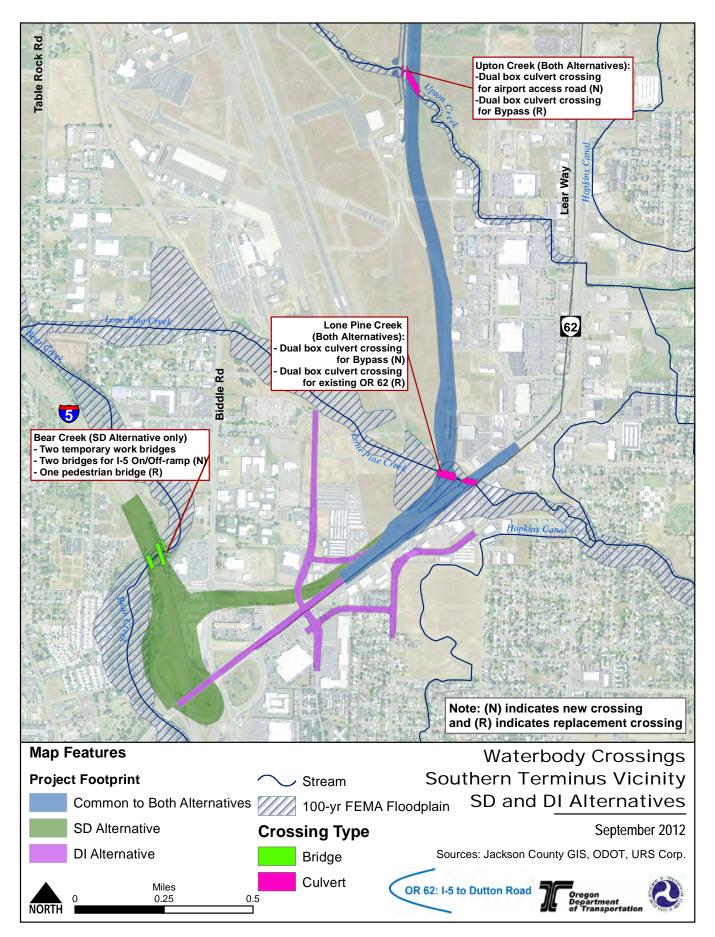
<sup>&</sup>lt;sup>2</sup>One replacement stream crossing removed due to removal of Justice/Gregory connector road from project.

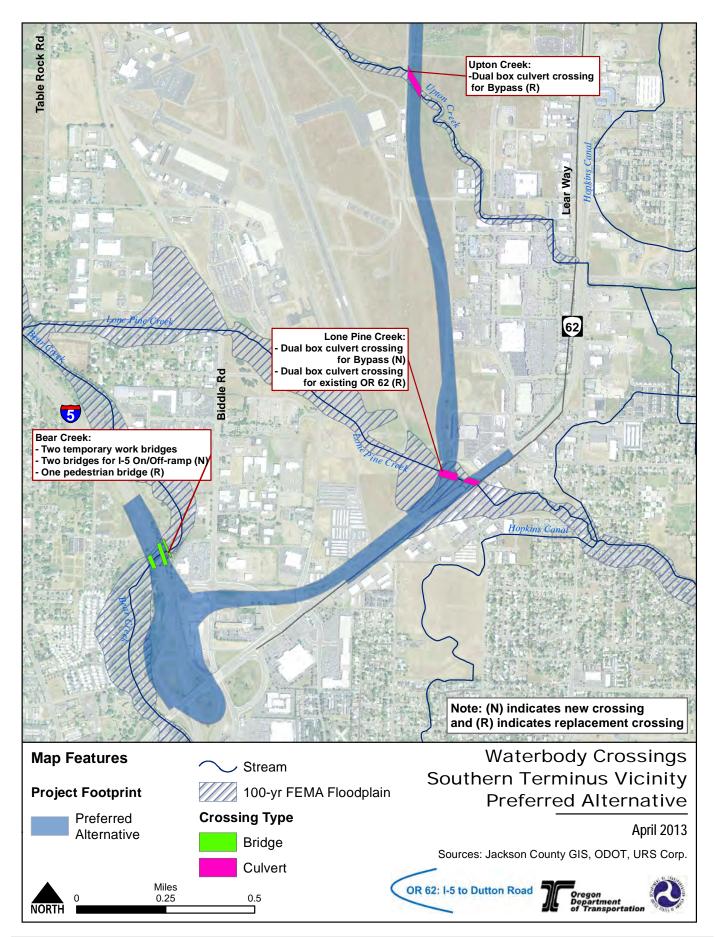
<sup>&</sup>lt;sup>3</sup>One new stream crossing removed due to removal of Justice/Gregory connector road from project.

<sup>&</sup>lt;sup>4</sup>One new stream crossing removed due to shifting of the alignment of the bypass at Whetstone Creek.

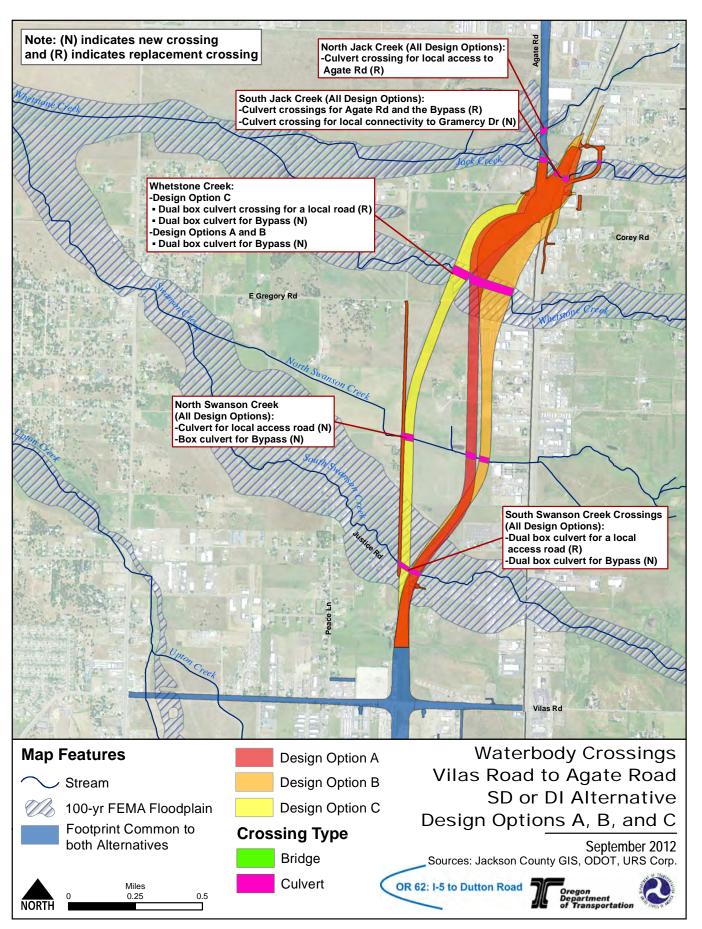
<sup>&</sup>lt;sup>5</sup>One new stream crossing removed due to removal of extension of Crater Lake Avenue to Gramercy Drive from project.

**Figure 3.9-2** 





**Figure 3.9-3** 



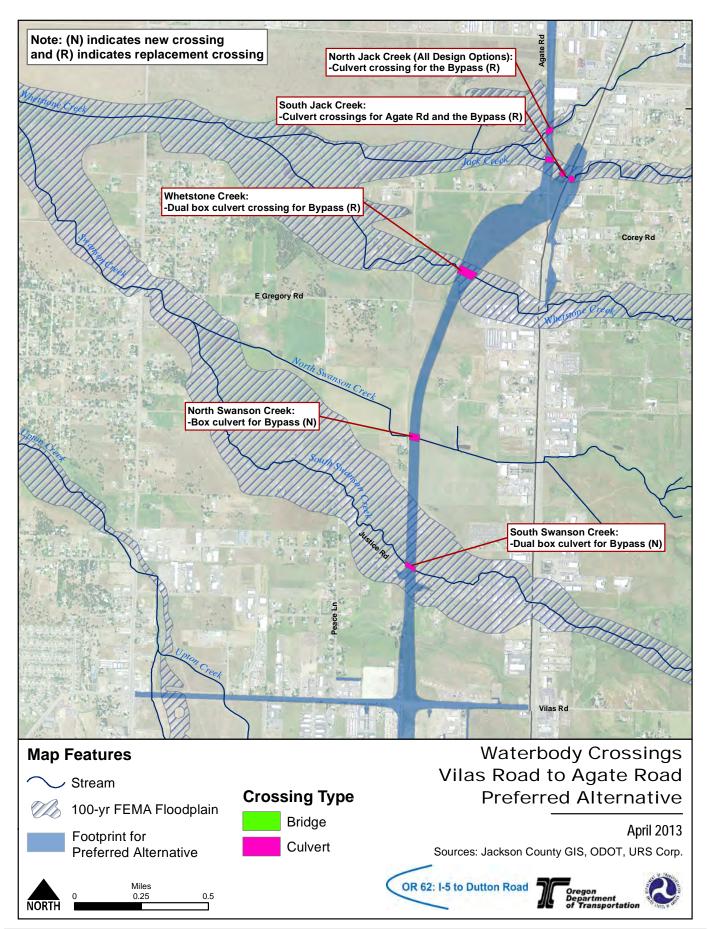


Figure 3.9-4

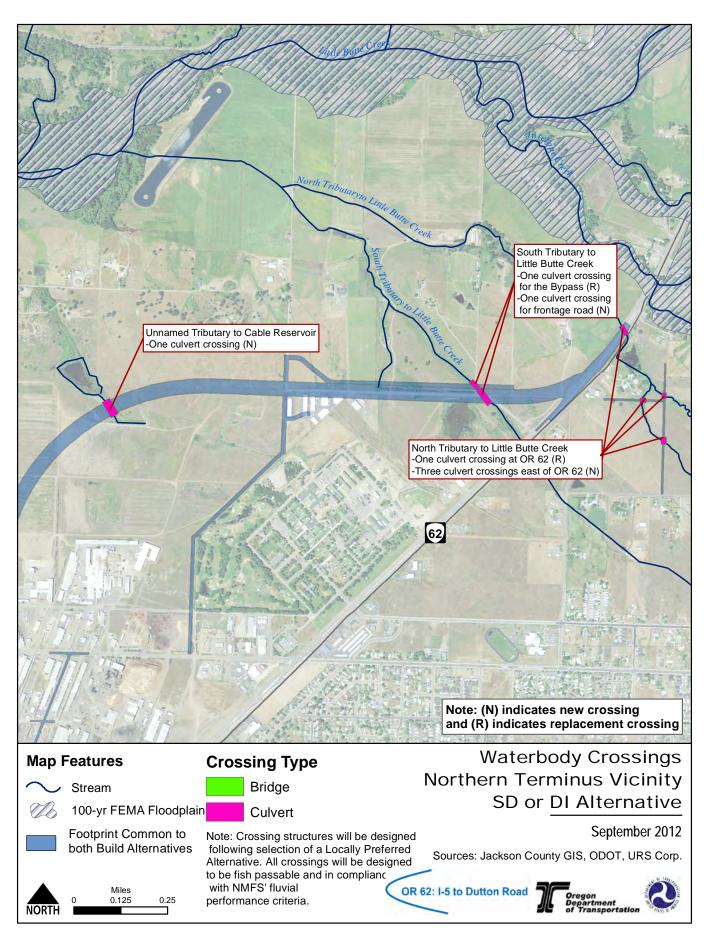


Figure 3.9-3 shows the area where the design options would differ. All three design options would involve the same number of new stream crossings and Design Option C would replace one more crossing than Design Options A and B as shown in Figure 3.9-3. The existing culverts would be replaced with larger fish passable culverts. Replacement of culverts with larger spans would allow more water to flow through the waterway crossing during storm events, potentially increasing flood levels downstream and either maintaining or lowering the upstream flood levels.

Figure 3.9-3 FEIS shows the stream crossings included in the Preferred Alternative. As a result of the design refinements discussed above, there will be no replacement stream crossing at South Swanson Creek, no new stream crossings at Whetstone and South Jack Creeks, and only one new stream crossing at North Swanson Creek.

Under all three design options, the bypass would cross South Swanson Creek on dual box culverts with the capacity to allow more water to flow through, compared to the existing crossing. The South Swanson Creek crossings would result in net fill within the 100-year floodplain. Under Design Option C, this crossing would be closer to the persistent flooding at South Swanson Creek, discussed in Section 3.9.2.2 above, and could have a higher potential to contribute to the flooding problems there. However, since the project would not affect the conditions that contribute to the existing flooding problems at South Swanson Creek (overgrown vegetation and privately installed culverts), this flooding issue would remain regardless of which design option is chosen. The South Swanson Creek crossings are estimated to increase the 100-year flood levels by up to approximately 0.2 feet downstream of the crossing. This increase is expected to dissipate within approximately 100 feet of the crossing; therefore flood levels are expected to dissipate prior to affecting properties downstream.

The bypass would cross North Swanson Creek on a box culvert. This crossing would not increase the 100-year flood level in North Swanson Creek.

Whetstone Creek would be crossed on dual box culverts. This crossing would result in a net cut within the 100-year floodplain and would not increase the 100-year flood level in Whetstone Creek.

The crossings for the north and south branches of Jack Creek and the three unnamed Little Butte Creek tributaries (labeled on Figure 3.9-1 as North Tributary to Little Butte Creek, South Tributary to Little Butte Creek, and Unnamed Tributary) would be the same regardless of which alternative or design option is selected. Of these streams, the south branch of Jack Creek is the only stream with a delineated 100-year floodplain, which would not be spanned but would be designed with no net fill.

More refined hydraulic modeling was performed for the South Swanson and Whetstone crossings since publication of the DEIS. The analysis is based on design details for the JTA phase, described further below, and results shown in Table 3.9-3 FEIS. The table shows that the Preferred Alternative will decrease flood levels upstream of the crossings and have no change to the flood levels downstream of the crossings at South Swanson and Whetstone creeks compared to existing conditions.

The Preferred Alternative would not result in a significant encroachment to any of the water bodies crossed by the project; therefore floodplain findings associated with 23 CFR 650, Subpart A and Executive Order 11988 are not needed. The Preferred Alternative, as discussed in the above text, would not increase water levels such that:

- Transporation routes for emergency vehciles or evacuation would be interrupted or terminated;
- Significant risks to life or property are posed by the project; or
- Natural or beneficial floodplain values would be adversely impacted.

Impacts on drinking water wells are not anticipated because the hard, clay soils in the area limit infiltration. Figure 3.9-3 shows the streams crossed by the design options.

#### **JTA Phase**

Table 3.9-2 and Figure 3.9-5 show there would be seven new stream crossings associated with all three JTA phase design options, plus three replacement crossings under JTA phase Design Options A and B and four replacement crossings under JTA phase Design Option C. The South Swanson Creek stream crossings associated with the JTA phase and its design options would be the same as those constructed under both the SD and DI Alternatives. These impacts to flood levels, which are anticpated to be localized and negligible, would occur under the the JTA phase.

The JTA phase will no longer include the new airport approach road or the Justice/ Gregory connector road, the alignment will be shifted slightly to the west at Whetstone Creek, and the JTA phase will not include the extension of Crater Lake Avenue to connect with Gramercy Drive. As a result, the JTA phase will result in four fewer new stream crossings and one fewer replacement stream crossing, as shown in Table 3.9-2.

A hydraulics analysis was conducted using HEC-RAS 4.0 to identify floodplain findings associated with the Whetstone Creek and South Swanson Creek stream crossings. This section only discusses results that pertain to the base flood (100-year) and maximum probable flood (500-year). Table 3.9-3 FEIS shows those results.

As Table 3.9-3 FEIS shows, the JTA phase will decrease headwater elevations in South Swanson Creek and Whetstone Creek for the 100-year flood and 500-year

Table 3.9-2 Number of Stream Crossings by JTA Phase Design Option

	Design Option							
	Design (	Option A	Design (	Option B	Design Option C (Preferred Alterntaive)			
Creek	New	Replace	New	Replace	New	Replace		
Bear	-	-	-	-	-	-		
Lone Pine	1	1	1	1	1	1		
Upton	1	1	1	1	1 0 <sup>1</sup>	1		
South Swanson	1	1	1	1	1	1 0 <sup>2</sup>		
North Swanson	2	0	2	0	2 1 <sup>3</sup>	0		
Whetstone	1	0	1	0	1 0 <sup>4</sup>	1		
South Jack	1	0	1	0	1 0 <sup>5</sup>	0		
North Jack	-	-	-	-	-	-		
Tributary to Cable Reservoir	-	-	-	-	-	-		
South tributary to Little Butte Creek	-	-	-	-	-	-		
North tributary to Little Butte Creek	-	-	-	-	-	-		
Total Crossings	7	3	7	3	7 3	4 3		

Source: Aquatic Resources Technical Report

<sup>&</sup>lt;sup>1</sup>One new stream crossing removed due to removal of airport access roadways from project.

<sup>&</sup>lt;sup>2</sup>One replacement stream crossing removed due to removal of Justice/Gregory connector road from project.

<sup>&</sup>lt;sup>3</sup>One new stream crossing removed due to removal of Justice/Gregory connector road from project.

<sup>&</sup>lt;sup>4</sup>One new stream crossing removed due to shifting of the alignment of the bypass at Whetstone Creek.

<sup>&</sup>lt;sup>5</sup>One new stream crossing removed due to removal of extension of Crater Lake Avenue to Gramercy Drive from project.

<sup>3 - 286 |</sup> CHAPTER 3: Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

flood compared to existing conditions. Water surface elevations for the 100-year flood and 500-year flood will remain the same. The existing Whetstone Creek crossing is a bridge that is 12-feet wide by 36-feet long. The proposed crossing under the JTA phase will be a double 12-foot box culvert, 95-feet long with a 6-foot rise (1-foot countersunk and 5-feet open to the stream).

The JTA phase will not increase the water surface elevations in South Swanson Creek and Whetstone Creek upstream or downstream of the proposed crossings for the 100-year flood and 500-year flood compared to existing conditions. The JTA phase will not result in a significant encroachment to any of the water bodies crossed by the project. This is because the JTA phase, as discussed in the above text, would not increase water levels such that:

- Transporation routes for emergency vehciles or evacuation would be interrupted or terminated;
- Significant risks to life or property are posed by the project; or
- Natural or beneficial floodplain values would be adversely impacted.

**Table 3.9-3 FEIS Flood Level Impacts at Crossings** 

<u> </u>					
		Flood or event)	Maximum Probable Floo (500 year event)		
	Existing Conditions	Proposed	Existing Conditions	Proposed	
Swanson Creek					
Discharge (cfs)	4.5	57	58	32	
Water Surface Elevation (feet) — Upstream	1288.03	1287.17	1288.26	1287.92	
Water Surface Elevation (feet) — Downstream	1285.92	1285.36	1286.35	1285.50	
Whetstone Creek					
Discharge (cfs)	3.5	51	44	18	
Water Surface Elevation (feet) — Upstream	1285.85	1285.30	1286.40	1286.02	
Water Surface Elevation (feet) — Downstream	1282.78-	1282.78	1282.87	1282.87	

### 3.9.3.2 Indirect Impacts

Indirect impacts of roadway projects on hydrology and flooding can result from increased storm water runoff and associated flooding that result from land development induced by the roadway.

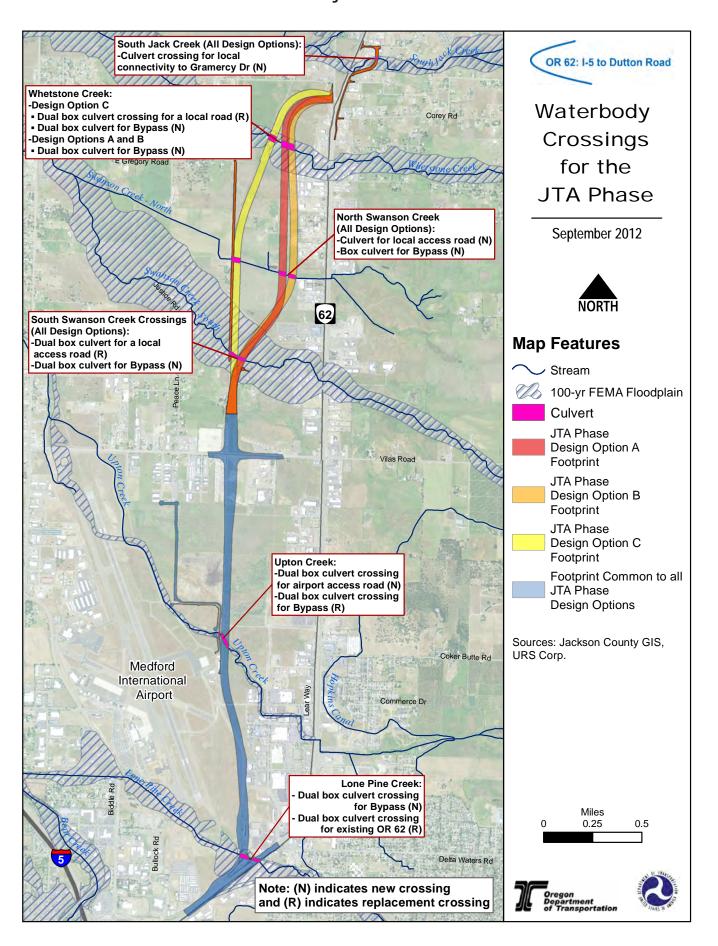
#### **No Build Alternative**

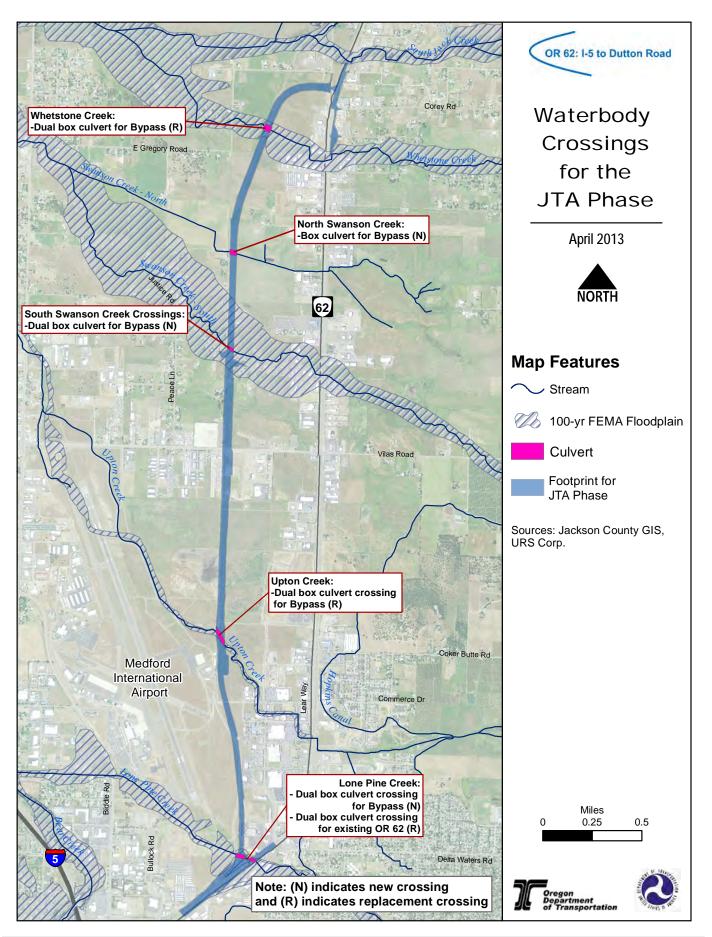
As described in Section 3.2, Land Use, build-out of the land within existing UGBs of Medford and Eagle Point and the White City UUCB would likely occur under the No Build Alternative, but plan amendments and zone changes to allow larger-scale development would be constrained. This development, although constrained, could add new stream crossings. Any new development would have to comply with local and federal requirements limiting development in floodplains, so impacts on regulatory floodplains are not expected.

#### **Build Alternatives and JTA Phase**

As described in Section 3.2, Land Use, the build alternatives and JTA phase could accelerate land development allowed by the Medford, Eagle Point, and Jackson County comprehensive plans, including within the White City UUCB, and reduce constraints on plan amendments and zone changes to allow larger-scale

**Figure 3.9-5** 





development within the Medford and Eagle Point UGBs. The Medford and Eagle Point zoning codes and flood zone ordinances would prevent development in floodplains that would cause net rises in flood elevations. However, it is possible that the large-scale development, if allowed, could increase storm water runoff sufficiently to increase flood elevations. This is because, while the City of Medford has detention requirements for new development and redevelopment, the City of Eagle Point does not have such requirements.

### 3.9.3.3 Construction Impacts

#### **No Build Alternative**

Under the No Build Alternative, there would be no construction impacts.

#### **Build Alternatives and JTA Phase**

Construction of bridge or retaining wall footings could elevate flood elevations, especially if a flood event occurs while work area isolation measures are in place. However, construction would occur within designated in-water work periods, making it unlikely that flood conditions would occur during construction. Potential impacts on flooding, though unlikely, would be higher under the SD Alternative than under the DI Alternative, because the SD Alternative includes construction within the Bear Creek floodplain involving two temporary bridges, which the DI Alternative avoids. Potential impacts on flooding would be lower under the JTA phase, because the JTA phase would cross fewer streams.

## 3.9.4 Avoidance, Minimization, and/or Mitigation Measures

As mentioned in Section 3.9.3.1, design information indicates that net new fill within the 100-year floodplain would likely result from construction of either build alternative and the JTA phase. As mentioned in Section 3.9.3.1, there will be no significant encroachment to floodplains or floodways. Therefore mitigation for flooding impacts is not expected to be necessary. If deemed necessary, potential measures to mitigate flooding impacts could include right-of-way negotiations and incorporating additional storm water detention structures in watersheds that are most vulnerable to flooding impacts, such as South Swanson Creek.

# 3.9.5 Avoidance, Minimization, and/or Mitigation Commitments Incorporated into the Preferred Alternative

There will be no significant encroachment to floodways or floodplains, so ODOT has no mitigation commitments for hydrology, floodplains, or floodways.

In-water work periods are identified by the Oregon Department of Fish and Wildlife as periods of time when work conducted in waterways would have the least impact on important fish and wildlife and are typically during the dry season.

A location hydraulic **study** is an evaluation of a proposed action in a floodplain that addresses risks associated with the action, impacts on natural and beneficial floodplain values, support of probable incompatible floodplain development, measures to minimize floodplain impacts, and measures to restore and preserve natural and beneficial floodplain values.